TEXTILE WORLD

A McGraw-Hill Publication ..... DECEMBER • 1951

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On Southern Mills . . .
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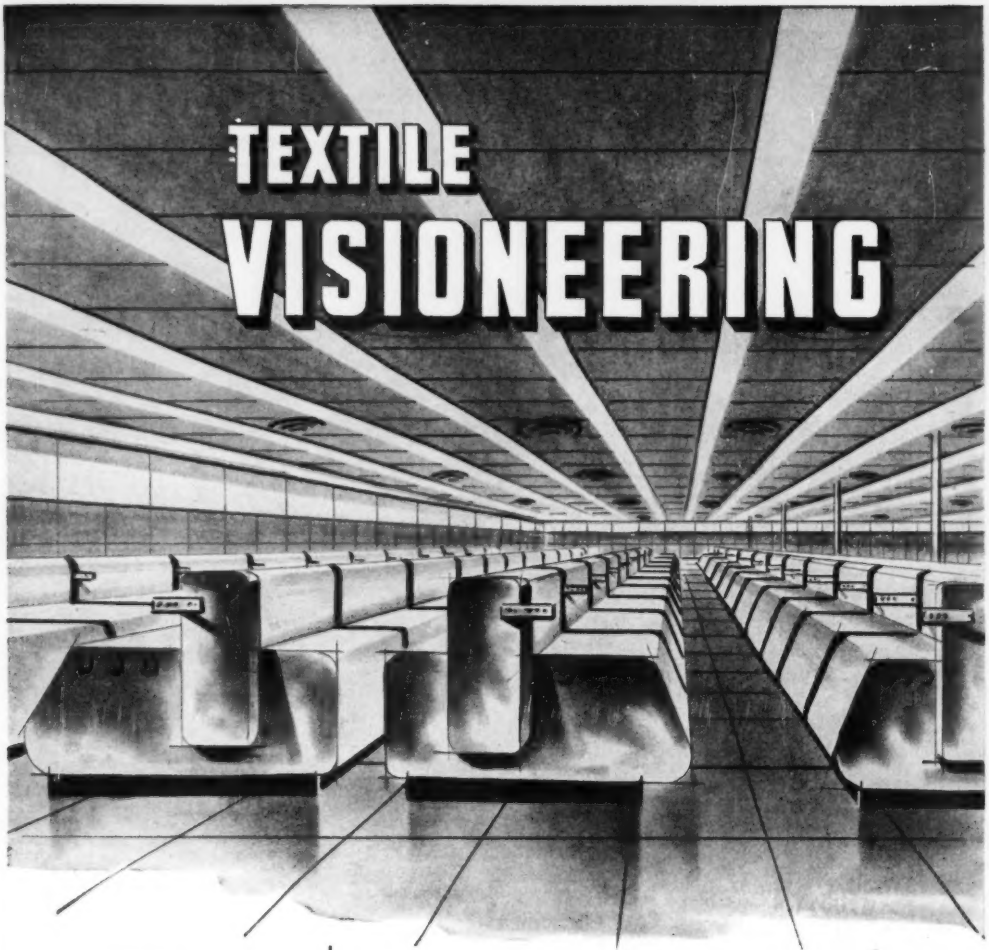

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Architects and Engineers

ATLANTA

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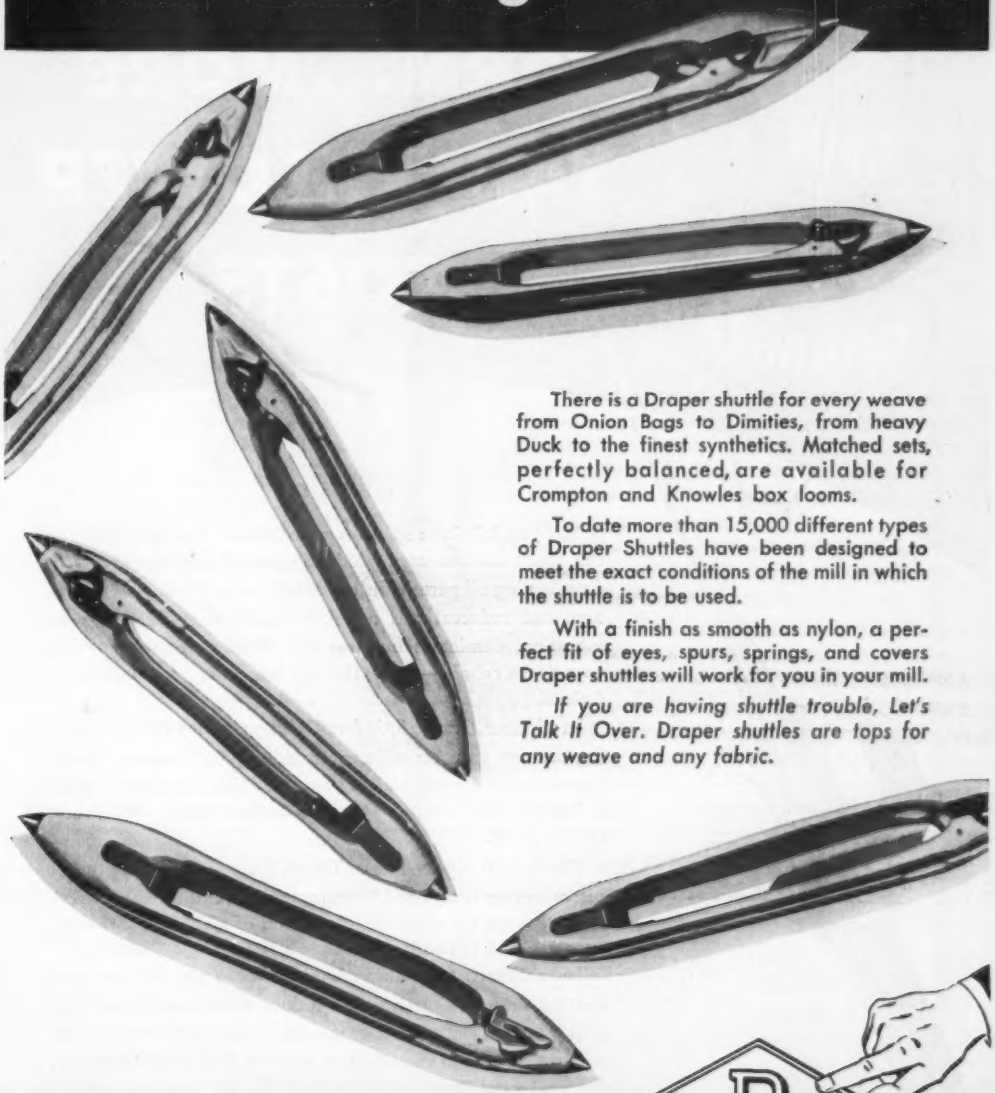

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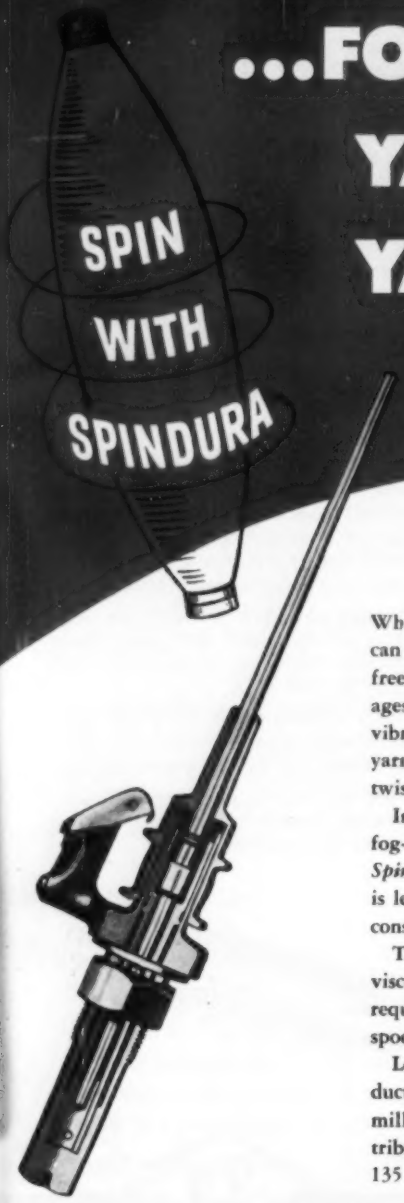

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THE *Long-Range* VIEW

Power Shortage

On page 118 of this issue, we show a few of the things mills can do to save power. Our reason for publishing this article is to draw attention to a situation that could be bothersome to mills, particularly in the South. It is well known that the South is growing industrially at a fast rate. It is not quite so well known that the South's power-generating capacity is less able to meet demands than any other region of the country.

The drought this fall placed several sections of the South in a serious position. A daily newspaper in Raleigh, N. C. over-printed in big red letters on its front page the plea: "Save Water." On October 11, the Pittsburgh Metallurgical Company in North Charleston, S. C., had to shut down because its power was cut back. In mid-November, this $1,500,000 plant was still idle and hinting that it might move out of South Carolina because power was not available.

It is natural that utility companies should try to minimize the prospects of power curtailment. It is natural also that mills dismiss the subject as something they can do nothing about. From a constructive point of view, though, mills should do everything possible to encourage the construction of new power-generating potential.

It is estimated by good authority that mills can save up to 10% of the power they normally use by cutting out floodlighting, village street-lighting, and other uses of power not directly concerned with machine production. Such steps, however, are in the nature of emergency measures and should not be necessary if utility companies had sufficient generating capacity.

Fortunately, substantial increases are planned. Some are now under construction. By the end of 1953, if the proposed generators are in operation, the power supply will be adequate again.

Unfortunately, new construction is not proceeding according to schedule, and it will be 1954 before the 1953 plans materialize. One of the principal drawbacks is shortage of metals. Government officials in charge of defense production and materials allocation continually warn that material shortages will be serious next year. It is expected that they will throw power-plant construction back a full year. So, for the next three years the South can look forward to a possible unsatisfactory power supply unless there is enough rain to keep power plants operating at above peak capability, as they have been doing most of this year.

As a matter of self-interest, mills should do what they can to relieve metal shortages. Two or three months ago urgent appeals were made for scrap iron and steel to keep steel mills working full-blast. Some of the urgency has gone out of the appeals, but the need for scrap is still critical. It will continue to be critical until the tempo of the current defense program is eased up.

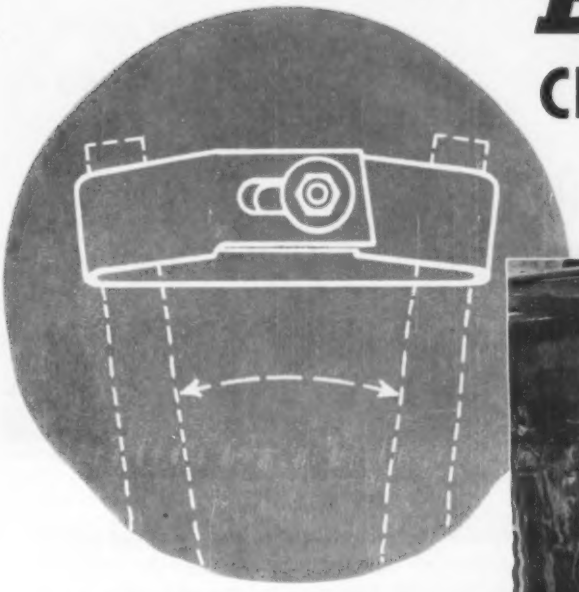
Ordinarily, metal shortages do not excite mills to any great extent. Textile-machine supply parts were manufactured throughout World War II; and with parts, a textile machine can be operated for many years. The pinch was felt in auxiliary equipment such as motors and air-conditioning equipment.

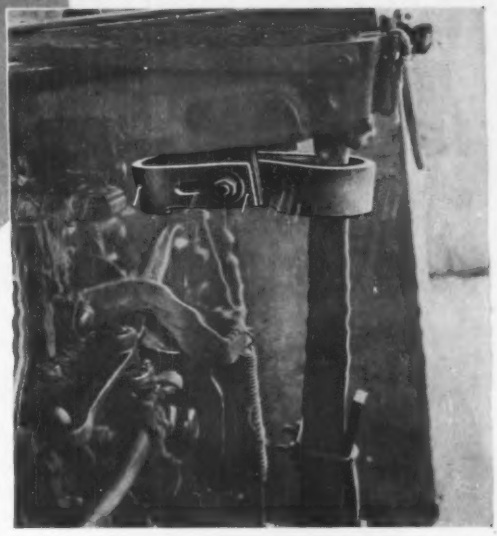
Unless our present guns-and-butter economy takes a turn for the worse, no great pinch will be felt in the next three years. However, mills will be doing themselves a good turn if they keep their scrap piles clean in an indirect effort to make more metal available for power-plant construction.

A. M. Thomas

EXCLUSIVE FEATURES

OF RHOADS *Bicuf** CHECK STRAPS





1 **Bicut permits edges of straps to flare . . . accommodating the arc of picker stick.**

2 **Bicut slots allow body of strap to drop . . . clearing binder bolts and nuts.**

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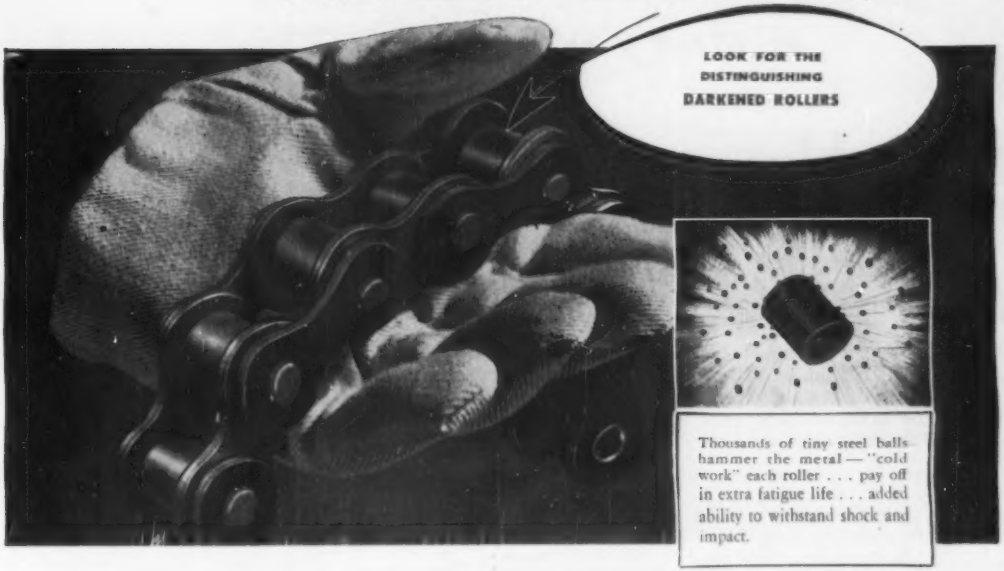

Thousands of tiny steel balls hammer the metal — "cold work" each roller . . . pay off in extra fatigue life . . . added ability to withstand shock and impact.

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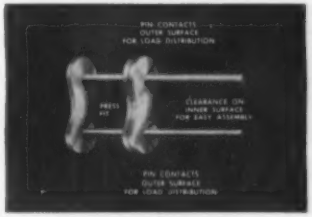

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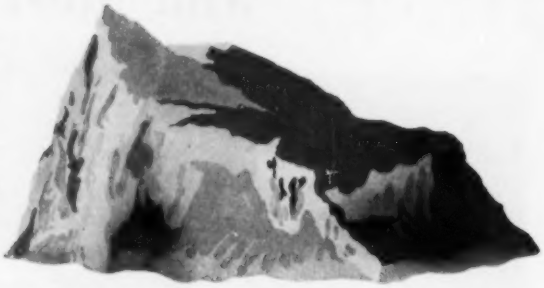

A FOUNDATION SOLID AS GIBRALTAR

TO the seasoned veterans of the Textile Industry, STE-HED-CO Products need no introduction. These products have long played a leading part in the scientific advance and development of weaving—they have been associated with every modern weaving accomplishment for the past half century.

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From its modest beginning, when the now famous "FLAT STEEL HEDDLE" was first introduced to replace the then universally popular Cotton Harness and Round Wire Heddle, the company has pioneered in every stage of weaving and has consistently inaugurated new and better methods for handling yarn in its process before weaving.

SOUTHERN SHUTTLES, organized in 1931 to round out a complete line of TEXTILE ACCESSORIES, is a Division of the Steel Heddle Mfg. Co. This Division, housed in its own air-conditioned plant, is designed, constructed, specially equipped and fully staffed to exclusively produce the world's finest and most durable Shuttles. And . . . Southern Shuttles has sponsored and pioneered all major shuttle improvements.

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1898

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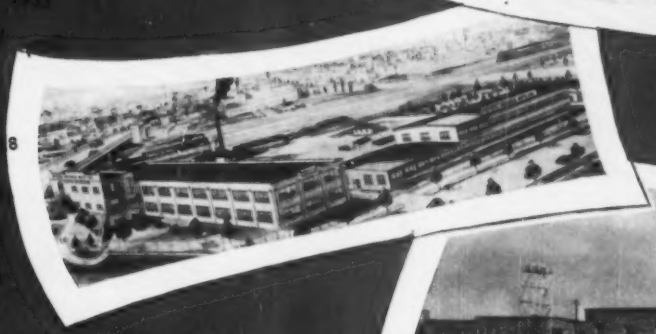

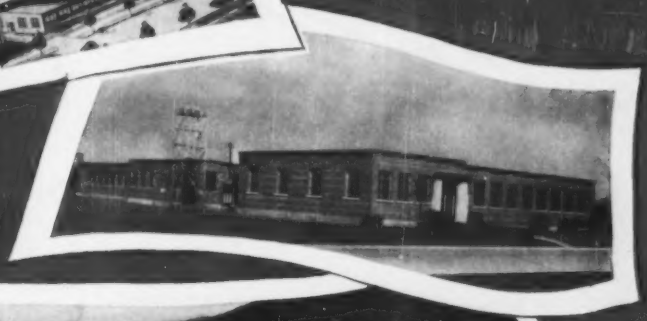

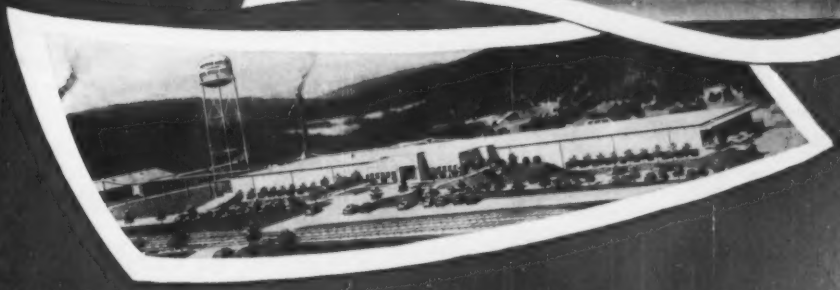

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SOUTHERN SHUTTLES . . . Paris Plant . . . Greenville, S. C. A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY of CANADA, LIMITED 310 St. Hubert Street • Granby, Quebec, Can.

1-52

For Sanforized fabrics don't settle for less:

Twitchell 7250 Oil gives you *all three advantages in one!*

SUPERIOR FIBER LUBRICATION . . . provides easy and uniform rearrangement of fibers during fabric pre-shrinking, assuring more uniform goods . . . eliminates sticking at the shoes.

FASTEST REWETTING . . . through high speed, uniform rewetting, you get increased production efficiency. For example, treating a 6 oz. untreated duck with a 3% solution of Twitchell 7250 reduces rewetting time from *5-10 minutes to only 15.2 seconds!* Rewetting ability is not affected by prolonged aging on fabrics or by finishing agents.

SOFT HAND . . . enables you to save on other finishing agents normally needed. In many cases Twitchell 7250 provides *all* the necessary softness.

In addition, this oil resists staining, yellowing, oxidation and rancidity . . . gives you the best rewetting buy on the market today. Save time, money . . . buy Twitchell 7250 today.

For a recommendation to fit your particular need, contact our Development and Service Department.

Other Twitchell Oils for other requirements. Select the one that best suits your conditions.

PRODUCT	FIBER LUBRICATION	REWETTING	SOFTNESS	STAINING
Twitchell 7250	Very Good	Fastest	Softest	None
Twitchell 7240	Excellent	Fast	Moderate	None
Twitchell 7231	Excellent	Medium	Slight	None

Emery *Twitchell Textile Oils*

EMERY INDUSTRIES, INC.
Carew Tower, Cincinnati 2, Ohio

BRANCH OFFICES:
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Warehouse stocks also in St. Louis, Buffalo and Baltimore

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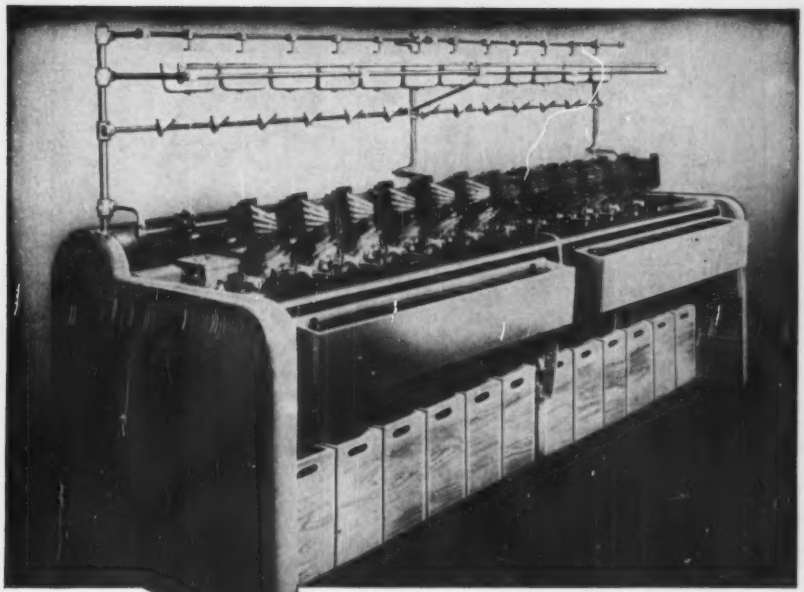
Schlafhorst

MACHINERY FOR WINDING AND WARPING



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20 Years Experience in Automatic Quillers

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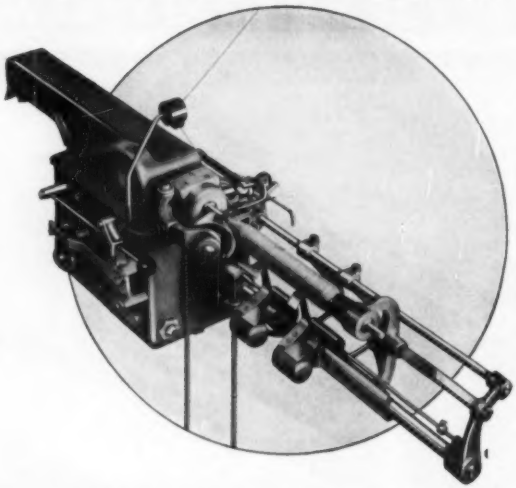
AUTOMATIC HOLLOW COP WINDER TYPE MT



The Automatic Hollow Cop Winder Type MT fills the need for a highly productive labor-saving machine for winding jute, hemp, paper, carded wool or any other coarse textile fibre.

Each spindle is a small machine in itself and is easily adjustable for length of cop, diameter and traverse length. All shafts, and the feeler cone building up the cop, run on ball bearings. Progressively acting three-disc-tension is provided, and a fool-proof safety device automatically stops the spindle if any obstruction to smooth running occurs.

An electric motor with 4-stage V-belt pulleys permits four different spindle speeds at each crossing.

GIVES MORE YARN LENGTH IN THE SHUTTLE AND DECREASES LOOM STOPPAGES

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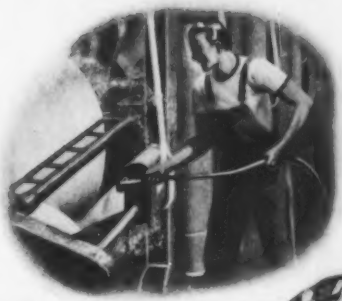
HORGEN (Zurich) Switzerland

Exclusive Agents for the United States and Canada

WHITIN MACHINE WORKS • WHITINSVILLE, MASS.



Check Your Hose Needs–

and answer most of them with

GOODYEAR INDUSTRIAL RUBBER PRODUCTS
-Specified ORTAC HOSE
for Universal Use
A
B
C
A Cover resists weather, oil, sun, abrasion.
B Braids of high-strength rayon cord.
C Synthetic tube resists gasoline, oils, distillates and alkalies.
ORTAC Oil Resistant Tube and Cover hose is available in sizes from 3/16" to 1½" in long, continuous lengths. Factory application of couplings if desired.

ORTAC

GOODYEAR'S ORTAC hose (Oil Resistant Tube and Cover) simplifies your hose-buying problems. For this *one construction* was designed by the G.T.M.—Goodyear Technical Man — to perform *many* assignments.

ORTAC will handle gasolines, fuel oils and distillates. It resists attack from alkalies, as well as the contaminants found in water. Excellent, too, for air and spray service. Its cover resists sun, weather and wear — ORTAC has a tube which will not flake, swell or discolor. Available in long, continuous lengths.

Ask your nearest distributor for full details on ORTAC—or write Goodyear, Akron 16, Ohio.

FOR HOSE, FLAT BELTS, V-BELTS, MOLDED GOODS, PACKING, TANK LINING, RUBBER-COVERED ROLLS built to the world's highest standard of quality, phone your nearest Goodyear Industrial Rubber Products Distributor.

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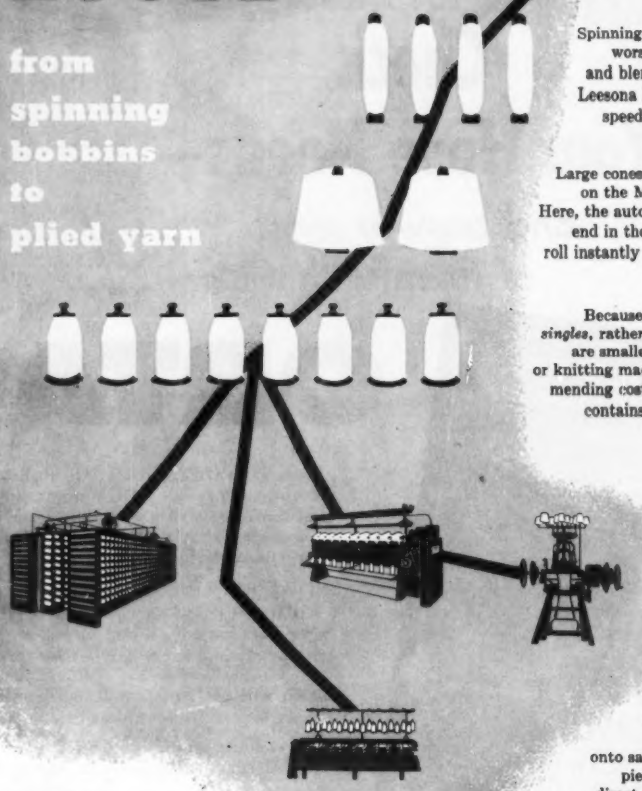
FASTEST, SAFEST ROUTE

from spinning bobbins to plied yarn



Eliminates doubling . . .
avoids costly delays

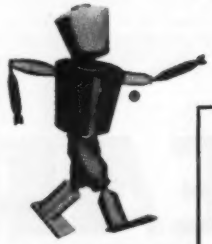
Spinning frame bobbins of cotton, worsted, spun rayon, spun nylon and blends are used as supply for the Leesona Roto-Coner* which winds at high speed and inspects the yarn *in the singles.*

Large cones are used as an *overend* supply on the Model 10 Ring Twister. Here, the automatic stop motion for each end in the ply stops the spindle and feed roll instantly when an end breaks or runs out.

Because ends have been tied *in the singles*, rather than in the ply, the knots are smaller, reduce stops at the loom or knitting machine, save burling and mending costs. Also, the twister package contains no drop ply.

Plied yarn from the large twister packages is wound on the Roto-Coner* onto sales yarn packages with minimum piecing-up . . . or can be used as a direct supply to filling winders or in warping creels.

23.1.9



Roto-Coner*
The Winder with the Rotary Traverse

*Reg. U. S. Pat. Off.

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LEESONA
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Model 10
Automatic Stop Motion for Each End and Ply

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A S/V engineer uses special instruments (like this moisture meter) to analyze mill operations.

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After analysis, S/V engineer prepares report, with recommendation of correct wool oil.

3. PROVED PRODUCTS...
Recommended from complete line, meeting all degrees of scourability and discoloration resistance.

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Technicians in S/V laboratories make tests of mill samples to control performance on the job.

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Show efficiency of fiber lubrication, make recommendations for still further improvement.

Why accept less for your mill?

There's no mystery about which wool oil is best for your operation when you call in Socony-Vacuum. Our fiber lubrication service and complete line of *S/V Woolrex Oils* assure your use of the right product—*on a price-performance basis!* Why not get all five benefits of this exclusive wool oil service?

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Process Products
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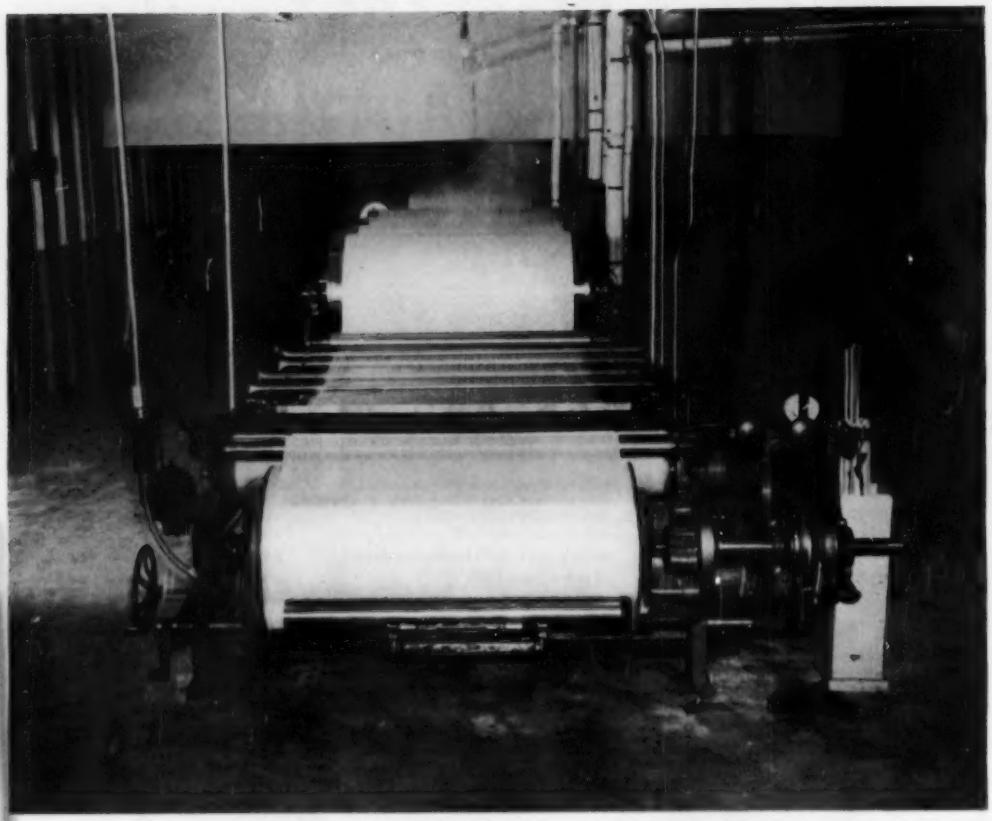
Socony-Vacuum Process Products

For Cotton and Rayon



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for warps of cotton, spun rayon, and various other man-made fibers.

Cotton, rayon, spun rayon, acetate, and other types of warps are being sized on these versatile machines by efficient mills who insist on quality and uniformity of production without breakdowns.

Write today for 16-page, 3 color catalog describing and illustrating the Johnson sizer in detail.

Charles B. Johnson PATERSON, NEW JERSEY

TROPIC MINT—hit of the Paris openings, choice of the Textile Color Card Association as an important spring green—is particularly smart with tone-on-tones, tortoise shell or rich spicy shades like *Benedictine*.

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Tropic Mint

a sun-kissed green for spring

To produce *Tropic Mint* exactly on woolens, Sandoz suggests a combination of probably the brightest *fast* blue on the market, the new Brilliant Alizarine Light Blue 3F Pat, and Xylene Light Yellow 2G. These dyestuffs are very level dyeing . . . completely compatible in the dye bath . . . have extreme light fastness when used in combination or separately.

For spring rayons and cottons...

Probably the brightest *fast* blue on the market, the new Sandoz dye, BRILLIANT ALIZARINE LIGHT BLUE 3F PAT, is well adapted to dyeing baby blues and other clear, light shades on yarn or piece goods.

SANDOZ

thinks ahead with textiles

SANDOZ

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use SANDOFIX·WE

SANDOFIX·WE insures clear, wash-fast colors. It is the outstanding assistant for producing saleable rayon sports fabrics at an attractive cost ★ Colors will not migrate in direct-dyed rayon and cotton when fixed with an after-treatment of **SANDOFIX·WE** ★ It increases fastness to washing and perspiration . . . makes fabrics more resistant to hot-wet pressing. **SANDOFIX·WE** also preserves acetate white effects ★ **SANDOFIX·WE** prevents "marking-off" . . . assures clearness of design in printing. Reliable results are obtained by using **SANDOFIX·WE** during the rinsing operation either in rope form or in the open width soaper ★ Write Sandoz for detailed information.

SANDOZ

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SANDOZ

For forecast colors as well as perennial favorites—select from Sandoz' line of chrome, acid, direct dyes and auxiliary chemicals for both natural and synthetic fibers.

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LINK-BELT Silverstreak Silent Chain Drives

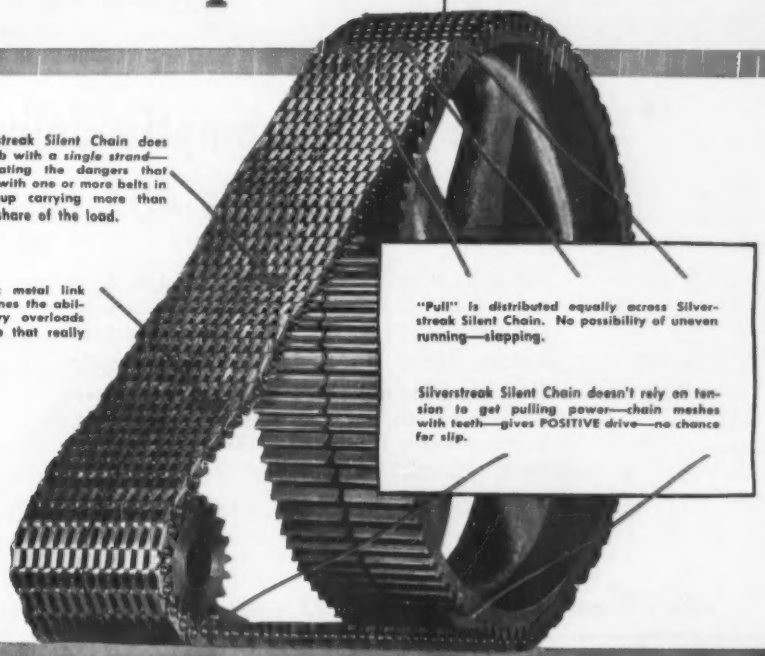
deliver full-rated hp

Slip-proof
Slap-proof
Shock-proof

There's no stretch, no slippage with Link-Belt Silverstreak Silent Chain Drives. You're sure of *positive* transmission of every unit of horsepower your motors develop. For every rating, every design has been proven 98.2% efficient.

You conserve space, too—Silverstreaks operate efficiently on extremely short centers. Ratios as high as 10-to-1 are commonly used.

For high speeds—for tough operating conditions—for years and years of trouble-free service—you can't beat Link-Belt Silverstreak Silent Chain Drives.



Silverstreak Silent Chain does the job with a *single strand*—eliminating the dangers that come with one or more belts in a group carrying more than their share of the load.

Husky Silverstreak metal link construction combines the ability to carry heavy overloads with the resilience that really absorbs shock.

"Pull" is distributed equally across Silverstreak Silent Chain. No possibility of uneven running—slapping.

Silverstreak Silent Chain doesn't rely on tension to get pulling power—chain meshes with teeth—gives POSITIVE drive—no chance for slip.

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12,209

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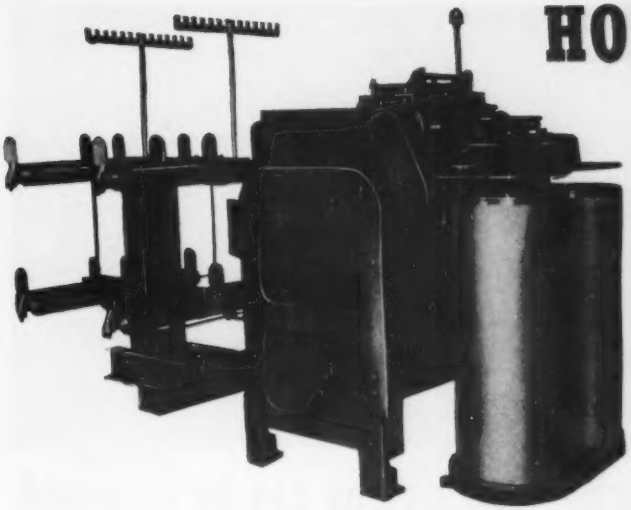

HOLDSWORTH Gill Reducer

Simplicity pays-off...

For The OPERATOR

Fewer red-lights! This machine just keeps running and running. Mechanical simplicity reduces the chance of stoppages; makes maintenance easier. For instance, the screws are pretimed at the factory and *remain* that way when the head is opened for cleaning or faller replacement. With each new installation, a Holdsworth factory man works with your operator, insuring initial optimum production.

For MANAGEMENT

Except for daily reports of top quality production, you will almost forget you have Holdsworth Gill Reducers running. Streamlined designing, well machined parts and a sturdy frame keep them off the worry list.

For The INVESTORS

Two end deliveries for the price of only *one* machine! The price is the lowest in the field, too. Production per machine, per dollar invested is greater than was previously attainable. Although the Holdsworth Gill Reducer has been on the market only a year, the greater percentage of orders on hand are re-orders from mills now operating test installations! What better reason could you have for investigating this machine yourself? Write or phone us for full data.

Español

El diseño simplificado reduce los riesgos de parada en el trabajo; hace más fácil la conservación. Los tornillos permanecen engranados cuando se levanta el cabezal. Bastidor resistente y piezas elaboradas a máquina.

Una máquina produce dos entregas. Es la máquina de menor precio en el ramo. La mayor parte de nuestros pedidos son repetidos de fábricas que trabajan actualmente instalaciones de ensayo. ¿Nos permite enviarle datos completos?

HOLDSWORTH GILL SCREW CO., INC.

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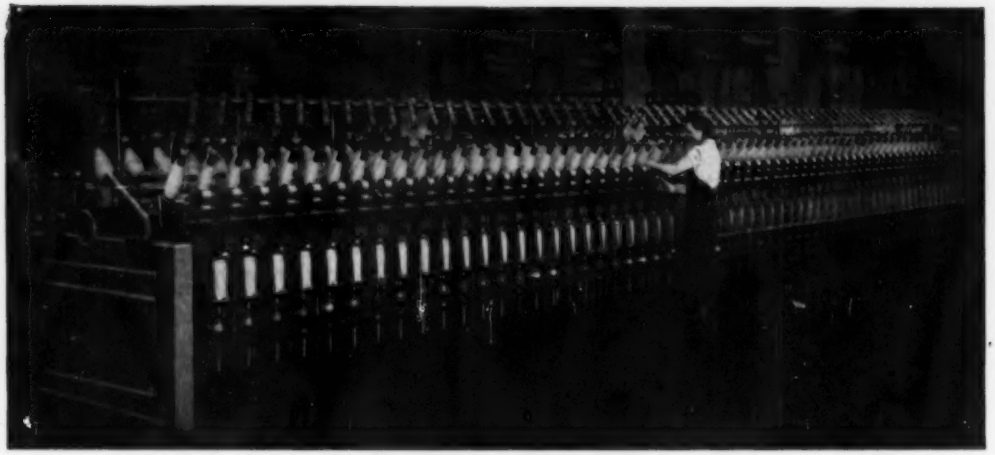
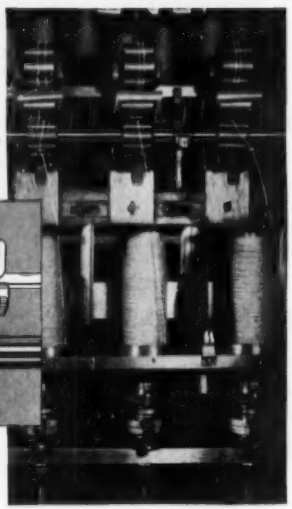
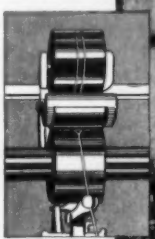


Production of hard twist woolen yarns can be increased.

A decidedly higher production per hour of many woolen yarns, especially hard twists of up to 12 turns per inch, can be expected with Prince-Smith & Stells' new 4 Fold Ring Woolen Twister. The many improvements, from lowering the overall heighth of the entire machine to use of Hoffman roller-bearing spindles and ball-bearing tension pulleys, increases spindles per operator, reduces maintenance time, and speeds production. The photos to illustrate our points were taken at the plant of A. & M. Karagheusian, Inc., while producing friezette yarns for fine Gulistan Carpets.



Six factors contribute to the higher production. (1) The new roller-bearing spindles run at a steady, vibrationless high speed, requiring oiling *only* once every 2500 hours. (2) Ball-bearing pulleys individually control the tension on each spindle tape, reducing power consumption, stoppages and slippage of spindles. As the tape is never off-center, less wear will be observed. Lubrication of these enclosed pulleys is required *only* 3 times a year. (3) A new and improved twin clutch spindle allows for more yarn per package and fewer doffings. (4) There is an independent lifter motion for each side of the machine, permitting various runs and twists to be made simultaneously. (5) Ease of accessibility to the gearing permits quick changes for various runs and twists. (6) Ball-bearing change speed device eliminates changing of the driving pulleys and permits quick alterations in spindle speeds. We will be glad to give you more first-hand information about this versatile Woolen Twister upon request.



Note the 2-ply twist running high into the nip of the front rolls.

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EASY SETTING
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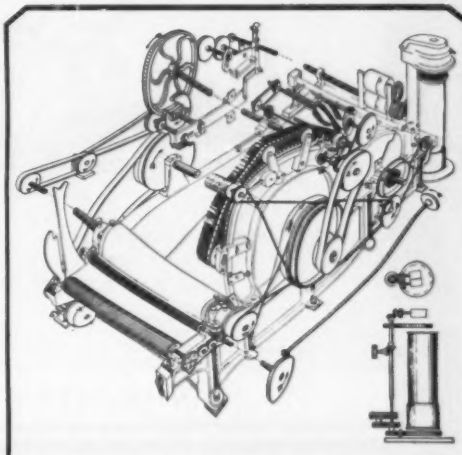
With Platt Bros. Revolving Flat Card, due to the exceptionally strong cross-rail construction and rigid foundation, accurate settings are easy to obtain and hold, insuring the production of an even, nepless web for both light and heavy carding. Vibration is virtually eliminated and air currents minimized. An independent motor drive does not increase the overall width of this well-designed machine. Cut staple fibers can be worked very satisfactorily on this card. Standard widths of 40" or 45" are available for prompt delivery.



STANDARD SPECIFICATIONS: 40" wide . . . Clothing for your requirements . . . Dish feed plate with fluted steel roller 2¼" dia. . . . Licker-in 9½" dia. covered with inserted saw-tooth wire-8 starts, 36 points per sq. in. . . . Ball bearings to licker-in pedestals . . . Cylinder 50" dia. . . . 106 flats 1⅜" broad . . . Improved flat grinding apparatus for grinding wire and flats from working surface . . . Improved front driving arrangement to flats . . . Doffer 27" dia. . . . Improved fly doffing comb. . . . Calender rolls 4" dia. . . . Coiler and can motions for sliver cans 36" long and 12" or 14" internal dia. . . . Machine cut gears and bevels throughout . . . Strap guide motion with handle bar . . . Pickford's locking motion with patented arrangement to obviate removal of strap fork during cylinder grinding . . . Drive to your requirements . . . Draft constant from lap roller to coiler calenders in the standard model may be 1680 or 2240 as required.

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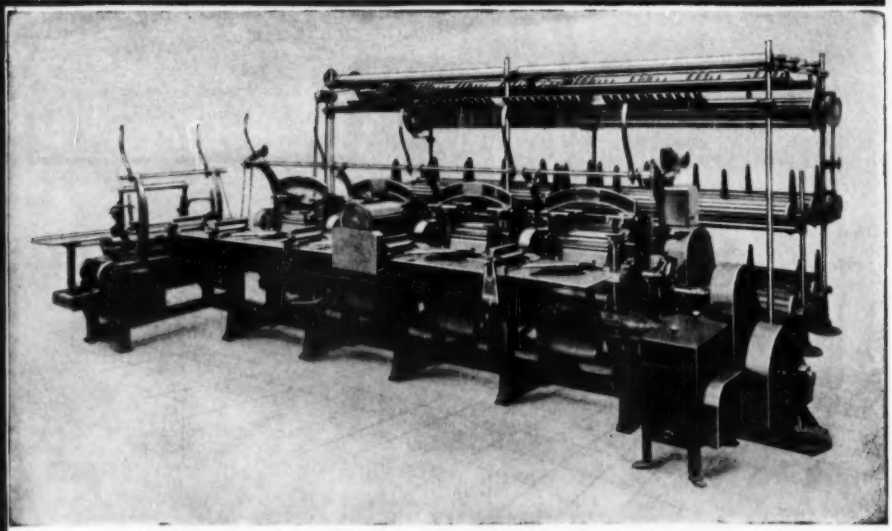

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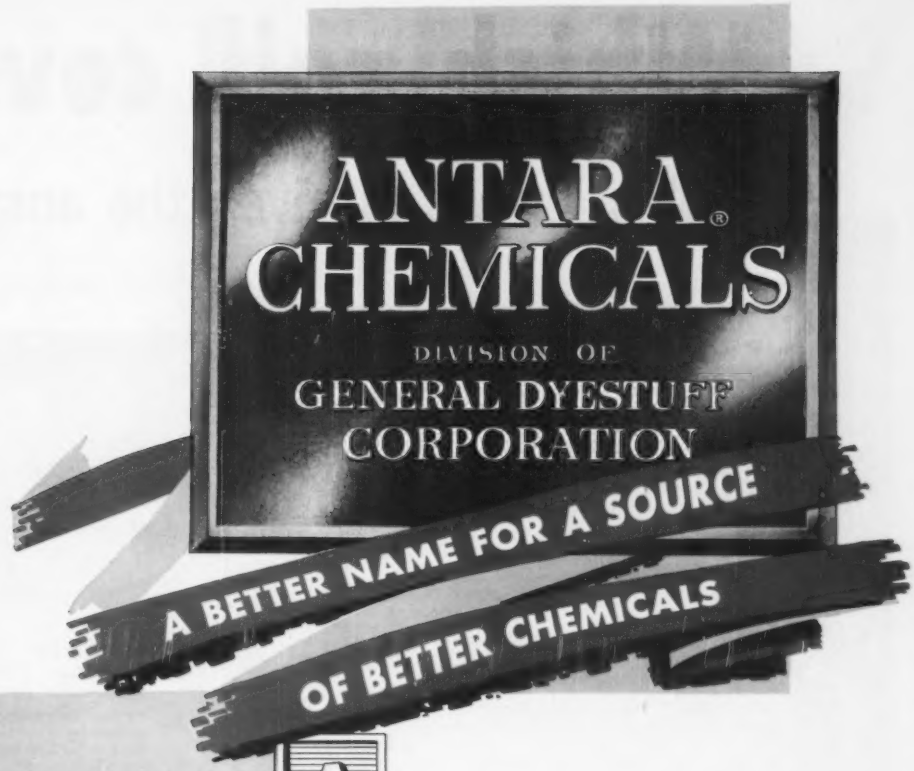

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SURFACTANTS —
anionic, nonionic, cationic — detergents, emulsifiers, dispersants, wetting agents, etc.

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OPTICAL WHITENING AGENTS
INDUSTRIAL CHEMICALS
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PAPER AND LEATHER CHEMICALS
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ACETYLENE DERIVATIVES
CARBONYL IRON POWDERS

ANTARA PRODUCTS, since October 1950 a division of General Dyestuff Corporation, this month changes its name to ANTARA CHEMICALS. The new name, it is believed, more accurately characterizes the general product line marketed by Antara—chemicals made by the General Aniline Works Division of General Aniline & Film Corporation for industry.

The change in name coincides with the inauguration of a multi-million dollar expansion program which will increase the research, production and service facilities of the division in the fields of surfactants, acetylene derivatives, intermediates and industrial chemicals.

For more complete information on any of the products in the broad categories listed at the left — or on the research, application and technical service facilities behind these products — please write on your company letterhead.

gdc ANTARA gaf

ANTARA CHEMICALS
DIVISION OF
GENERAL DYESTUFF CORPORATION
435 HUDSON STREET • NEW YORK 14, NEW YORK

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IN CANADA: Chemical Developments of Canada Limited, Leaside, Toronto 17
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FOR THE FINEST AND FASTEST in Dyestuffs—it's INDANTHRENE...Ask For It!

Which roll covers

A stop watch gives the answer

Here's the scientific reason why

The main point in measuring the lap resistance of a roll cover is this: Does it consistently let a broken end run free long enough to go down onto the scavenger roll?

Textile research men at Armstrong's have worked out a way to answer this quickly. It's a simple test that shows in minutes what it would normally take months to prove in the mill. Test results stand up in practice, too. Cots which work well on this test, perform equally well in the mill.

Here's how this test works. First, the test cot is put on a frame section from which scavenger roll and clearer board have been removed. The frame is then speeded up to many times normal.

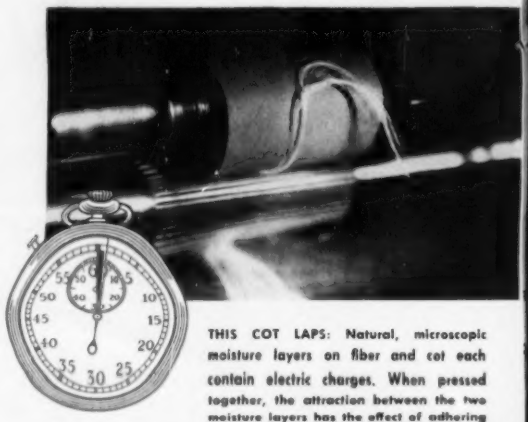
Next, the technician breaks an end and checks with his stop watch how long the cover lets the end run free. The longer the end runs free, clearly, the better chance it has in the mill of dropping to the scavenger roll, and the better the lap resistance of the cot.

In thousands of such tests against the stop watch, Armstrong's Accotex Covers consistently prove that they have more lap resistance than any other cover tested.

Why? Because Accotex Covers are made with an exclusive formula. Each Accotex Cover contains "electrolytes" . . . special ingredients that eliminate one of the principle causes of lapping . . . the attraction between fiber and roll cover.

Armstrong makes a complete line of these patented lap-resistant covers. Whether you spin cotton, wool, synthetics, or blends, your Armstrong representative can suggest the right Accotex Cover for your work.

Call him today or write Armstrong Cork Company, Textile Products Department, 8312 Arch Street, Lancaster, Pennsylvania. Accotex Cots are available for export.



THIS COT LAPS: Natural, microscopic moisture layers on fiber and cot each contain electric charges. When pressed together, the attraction between the two moisture layers has the effect of adhering fibers to cot, causing ends to lap up.

THIS COT RESISTS LAPPING: Certain electrolytes put in patented Accotex® Covers neutralize electric charges in moisture layer on the cot. This destroys the adhesive effect of the two moisture layers and lets broken ends run free.

ARMSTRONG'S ACCOTEX COTS

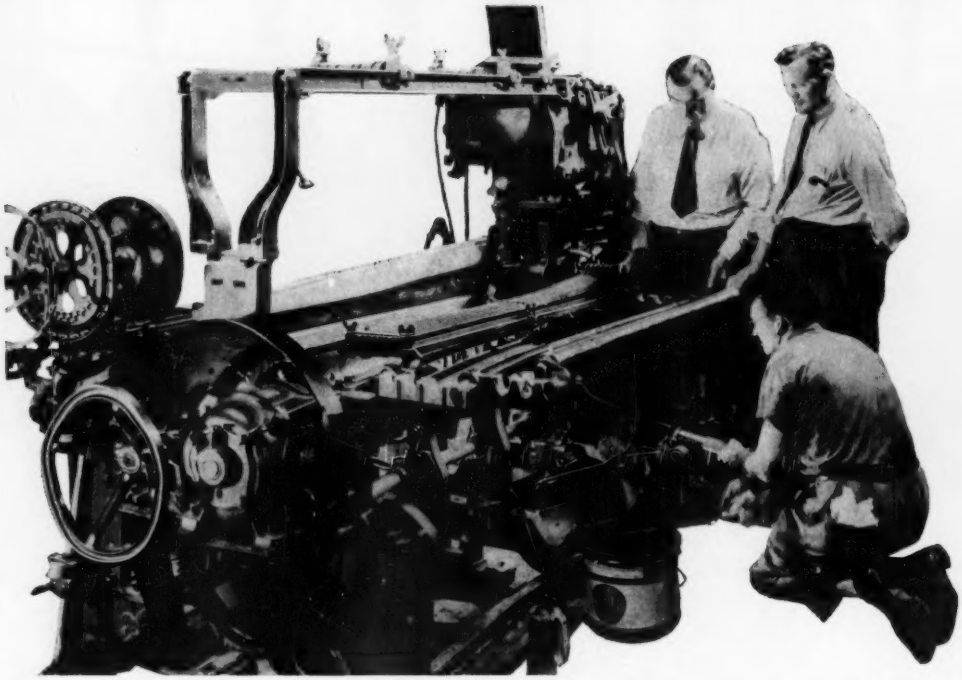
resist lapping best?

WHEN AN END BREAKS, will the cover let the yarn run free long enough for it to go down on the scavenger roll? Tests in our laboratories, backed by mill experience, show that many covers will not. They lap up within a split second after an end breaks, before the yarn can get to the scavenger roll. Armstrong's Accotex Cots consistently let broken yarn ends run longer than other covers tested.

a timely new approach

to improved production and lower maintenance costs

...Gulf Periodic Consultation Service



Here's effective help for every textile mill—Gulf Periodic Consultation Service. From this single source you can get practical help on any problem that involves a petroleum product—lubricants, fuels, solvents, rust preventives, special process oils, waxes.

Gulf Periodic Consultation Service makes available to you the regular counsel of one or more trained engineers who have years of experience with every type of textile process and equipment, and technologists who are skilled in every phase of petroleum science.

This knowledge and experience can be applied profitably to your operating and maintenance problems. Send for your free copy of the booklet which details *how* Gulf Periodic Consultation Service can help you reduce costs and improve production.

FIFTY YEARS OF SERVICE
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PETROLEUM AND ITS PRODUCTS

Gulf Oil Corporation · Gulf Refining Company TW
719 Gulf Building, Pittsburgh 30, Pa.

Please send me, without obligation, a copy of the booklet "Gulf Periodic Consultation Service."

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Company.....

Title.....

Address.....

The "on-the-wall" test shows why famous Barreled Sunlight is America's outstanding paint value

You have to see it to believe it...

When you compare the price tag of a gallon of Barreled Sunlight with that of a gallon of any other good paint, there really isn't much difference. But, boy oh boy, when you put it on the wall, there is where you see the big advantage in value that you get with Barreled Sunlight.

For example, if you take a gallon of Barreled Sunlight and a gallon of any other good paint and thin each according to directions, you'll see that Barreled Sunlight gives you more paint ready for the brush. Which means, of course, you buy less paint.

But of greater importance, when you see how faster and easier a painter can cover a test area with Barreled Sunlight, you'll realize how much you can save in labor, which represents 80% of the cost of a painting job.

And finally, when you see how much better and brighter it looks after drying you'll be convinced that Barreled Sunlight will give you a better looking, longer lasting paint job for less money than any other paint.

Let our representative show you how an on-the-wall test can lead to important savings for you. Write and he'll call.

WE'LL BE AT THE PLANT MAINTENANCE SHOW PHILA. JAN. 14-17

BARRELED SUNLIGHT PAINT COMPANY
20-L Dudley St., Providence, R. I.

Barreled Sunlight®

The Master Painter's Master Paint

In whitest white or clean, clear, wanted colors, there's a Barreled Sunlight Paint for every job

For over half a century the symbol of quality and dependability among paint buyers for leading industrial, institutional and commercial buildings

INTERCHEMICAL

Your Most Logical Source
for the Finest Textile

Colors

INTERCHEMICAL CORPORATION

Textile Colors Division

Rock Hill, S. C. Hawthorne, N. J. Pawtucket, R. I.

ARIBASE† solutions

NEW

Aribase Solutions are Interchemical's new line of stabilized bases for coupling with Interchem Napthols in your own plant.

ECONOMICAL

Aribase Solutions permit you to produce with utmost economy fast-color prints identical in fastness to those obtained with the Arigen* line of stabilized azoic dyes.

VERSATILE

Aribase Solutions produce brilliant reds, scarlets, dark blues, and violets. They can be applied in conventional gum thickeners or by Interchemical's exclusive Aquadye* Emulsion method. They are particularly suitable for printing alongside Aridye Pigment Colors.

- For samples and complete information write Interchemical Corporation, Textile Colors Division, Hawthorne, New Jersey.

Interchem Dyes
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Aridye PIGMENT COLORS
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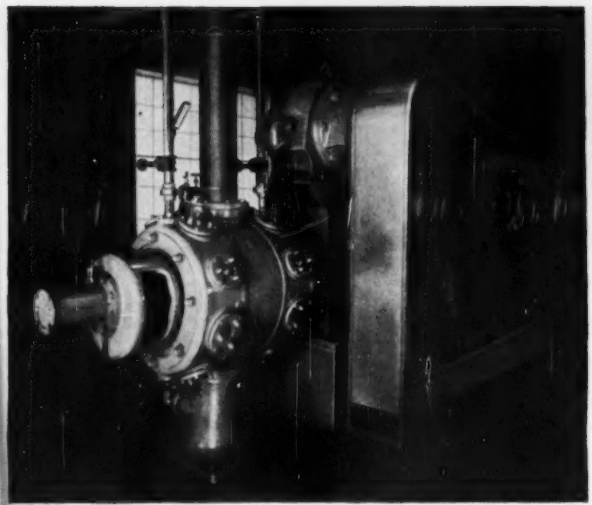
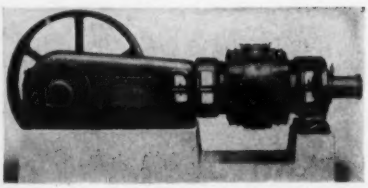
AIR FREE FROM OIL



WITH OVERHEAD V-BELT DRIVE



CLASS T-BO BELT-DRIVEN
OIL-LESS CYLINDER COMPRESSOR

Since no oil, grease or other cylinder lubricant is required in CP OIL-LESS CYLINDER COMPRESSORS, they are ideal where it is essential that compressed air be absolutely free from oil to avoid injury to products.

Piston and rod, completely supported by tail rod and outboard crosshead, are full floating, removing all weight from cylinder wall and stuffing boxes. This assures long life of segmented carbon piston rings, with no need for periodically rotating them.

CP OIL-LESS CYLINDER COMPRESSORS are available in a wide range of sizes and ratings; in single and two-stage types; arranged for belt, motor or steam drive.

WRITE FOR BULLETIN 728-8

CHICAGO PNEUMATIC TOOL COMPANY
General Offices: 8 East 44th Street, New York 17, N. Y.

PNEUMATIC TOOLS • AIR COMPRESSORS • ELECTRIC TOOLS • DIESEL ENGINES
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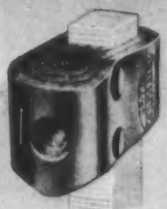
For more information, write direct or use Reader Service post card.

Follow-thru with Leather

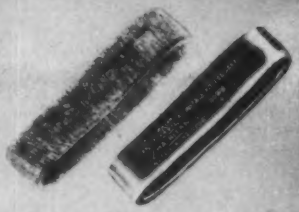
Cut Shuttle Cost, Stop Kinky Filling Increase Profits with Graton & Knight TEXTILE LEATHERS

Graton & Knight Textile Leathers present an opportunity for mill men everywhere to secure the many benefits which only leather can give. The line includes 25 functional types for Draper Looms; 33 for Crompton & Knowles Looms. Each is an *engineered* product, it's quality controlled from green hide to the finished part: accurate — dependable — economical.

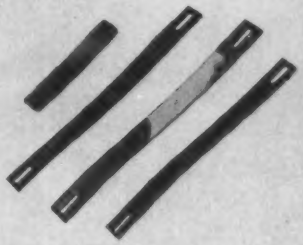
Be sure to see the G&K-DIXIE salesman, who has the complete story of why it will pay you to *Follow-thru* with the famous G&K-DIXIE Orange Line Loom Leathers and G&K Aprons and Tapes.



Pickmaster® Pickers do not bounce the shuttle, or cause the shuttle spur to heat up. Promote smooth shuttle flight and accurate boxing.



Endless Check Straps provide controlled cushioning action for the picker stick. They are positioned perfectly for each pick, and conform to the angle of the picker stick at all points.

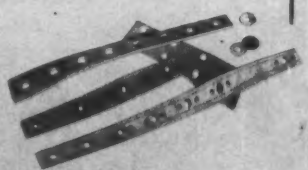


Straight Check Straps with low permanent stretch and high resiliency promote smooth shuttle throw. Built to flex uniformly and outlive ordinary straight check straps.

Boxmaster Binder and Box Plate Leathers of special HAIRITAN® Leather with smooth, catch-free edges and deep, velvety surface. Need no waxes or fillers — do not "bleed" and discolor the filling yarn.

Lug Straps, Lug Hold-up Straps. Tough and resilient, these leathers are built to stand up to gruelling punching and whipping every second for longer periods than you imagine possible.

Harness Leathers, Heel and Jack Straps, give smooth lifting action — stand up under jolting and jerking. Their low permanent stretch retains correct lengths — their toughness resists tearing.



Spindle Bumper Straps take a beating and come back for more.* Their long-life resiliency and ruggedness mean long dependable service. Patented SPIN-TEX 3-ply strap has tough fabric insert.

100 YEARS OF SERVICE TO INDUSTRY

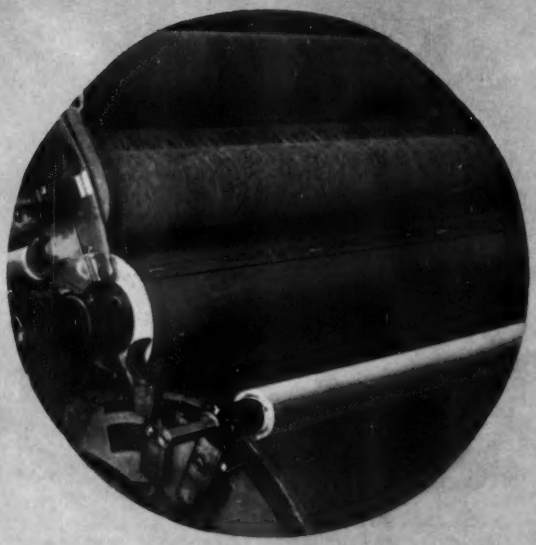
GRATON AND KNIGHT®

DIXIE LEATHER CORPORATION

Textile Leathers

'FAMOUS ORANGE' LINE TEXTILE LEATHERS

GRATON & KNIGHT COMPANY, WORCESTER, MASS. • DIXIE LEATHER CORPORATION, ALBANY, GEORGIA *Affiliate*



in plain words . . . this new woolen card saves money

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MACHINE COMPANY

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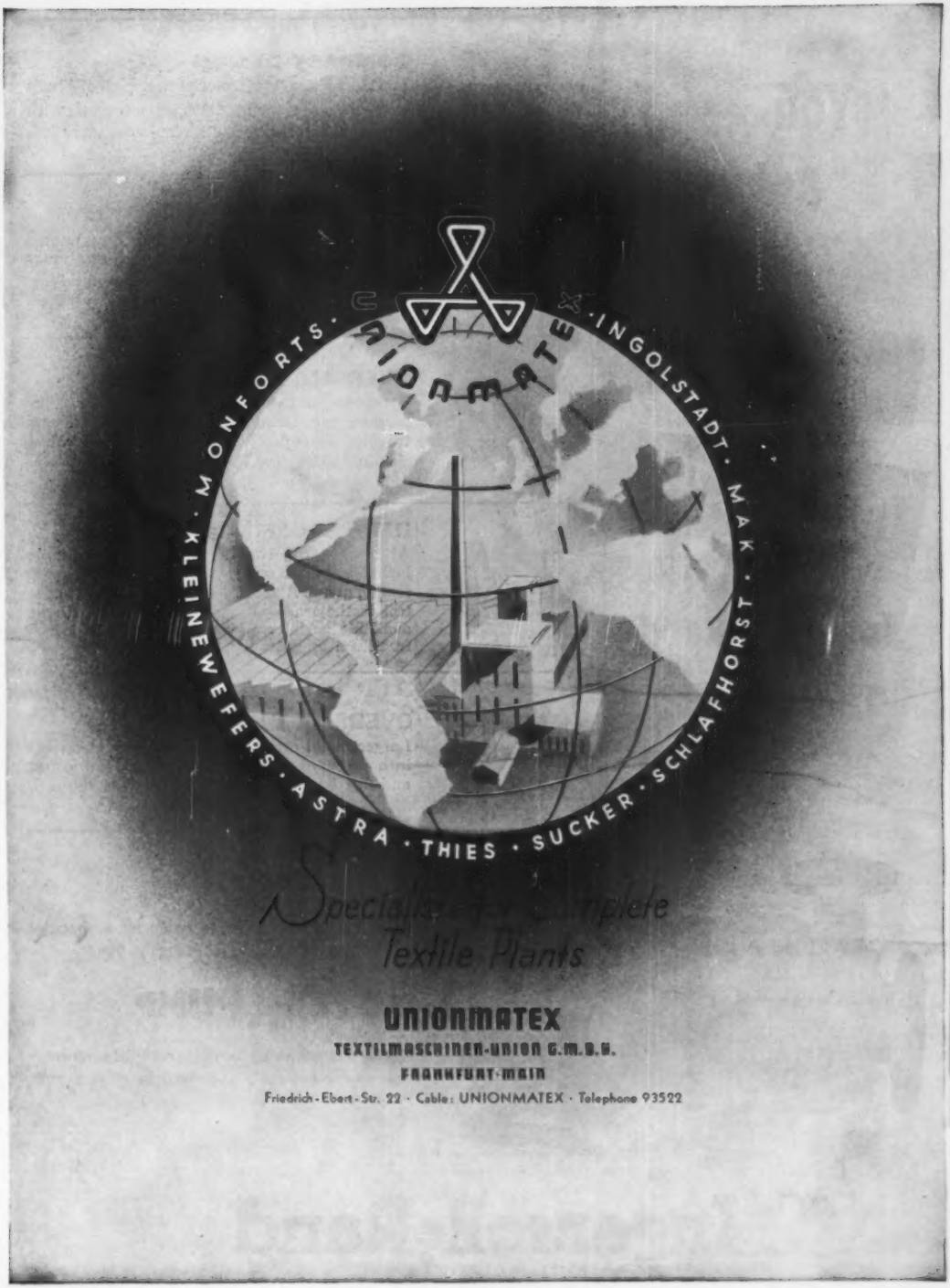
TEXTILE MACHINERY • TAPES • CARD CLOTHING

★ *Write and ask us WHY and HOW our new Model 'L' Card can save you money.*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You get these 5 BIG ADVANTAGES with Ingersoll-Rand MOTORPUMPS

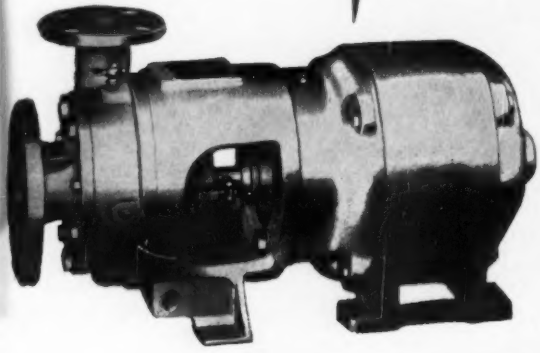
1 COMPACT DESIGN
Ingersoll-Rand Motorpumps are ruggedly built with motor and pump combined in one unit with a single shaft. Saves space; eliminates vibration.

2 OPERATE IN ANY POSITION
These pumps operate efficiently whether mounted horizontally, vertically or at any angle. This means that it can be bolted to floor, wall, ceiling, tank or column, whichever is most convenient.

3 OVERSIZE SHAFT
This insures minimum shaft deflection, a smooth-running impeller, and eliminates many packing troubles. Shaft protected against wear and corrosion by shaft sleeve.

4 DEEP STUFFING BOX
All heavy-duty Ingersoll-Rand Motorpumps have space for 5 or more rings of packing and a sealing gland. A needle valve provides exact control of the sealing liquid. Mechanical Seals are available on integral hp units and standard on fractional hp units.

5 OVERSIZE BEARINGS
Larger radial and thrust capacity than bearings in a standard motor. Also protected from dust and dirt by cartridge type housings.



Available in sizes from ¼ to 40 hp. Capacities from 10 to 1800 g.p.m. Heads up to 600 ft.

MOTORPUMP

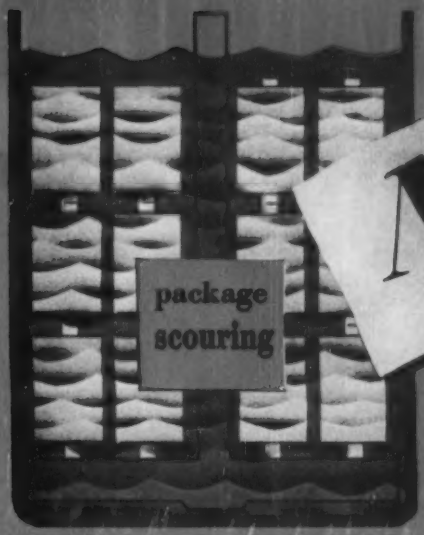
Get in touch with us for more complete information or for any help you need in solving your pumping problems.

Ingersoll-Rand

11 BROADWAY, NEW YORK 4, N. Y. 516-9

for cotton yarn scouring add

Nacconol*



use One to two pounds of NACCONOL per 100 gallons of scouring liquor plus three to five pounds of Soda Ash.

get **Cleaner, freer rinsing cotton with a better bottom for dyeing.**

You'll speed up scouring and do a better printing or dye job, if you switch to NACCONOL in your mill. For better quality at lower cost all along the line specify NACCONOL. Write, wire or phone our nearest office for a quote on your needs.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

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Your Best Motor and

THESE MOTORS NEED NO LUBRICATION

Westinghouse pre-lubricated bearings are paying big dividends to users throughout the textile industry in many ways. Lubrication maintenance is out! Factory sealed, pre-lubricated bearings need no further lubrication. Down time from bearing failures due to over or under greasing is a thing of the past. Pre-lubrication is positive. And there is no chance for dripping grease to mar textile.

Life-Line Loom Motors

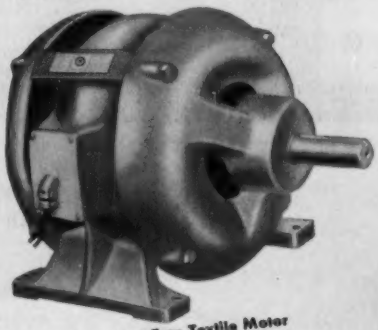
Have balanced design, with an ideal combination of speed-torque characteristic and fly wheel effect, resulting in optimum loom performance. Life-Line construction provides maximum strength, minimum dimensions, and a smooth easy-to-clean finish.

Lint-Free Motors

Streamlined, highly polished, stator windings and smooth internal surfaces prevent clogging and offer no foothold for lint to accumulate.

Both these motors are available. Act now. Call or wire your nearest Westinghouse Electric Corporation Office.

Foot-Mounted Life-Line Loom Motor



Lint-Free Textile Motor

YOU CAN BE SURE... IF IT'S Westinghouse

TEXTILE MOTORS and CONTROLS

Control Buy Today

Loom Motor Starter on Mounting Pedestal

REDUCE FIRE HAZARDS WITH THIS LINT-TIGHT STARTER

Report: "According to a study of weave-room fires by the Associated Factory Mutual Fire Insurance Companies for the period of 1935 to 1945, 38.8 per cent of the electrical fires in weave rooms were caused by loom motor starters."

Approved by Associated Factory Mutual Fire Insurance Companies

Designed in collaboration with the engineering division of the Associated Factory Mutual Fire Insurance Companies and leading textile manufacturers, this starter is aimed specifically at reducing weave-room fire hazards. No chance for combustible lint and dust to reach contacts and spark an explosion. It's the only starter approved by the Associated Factory Mutual Fire Insurance Companies.

Best motor protection you can buy

Outstanding Westinghouse features assure positive motor protection and long motor life. Positive bimetallic overload protection . . . quick-make—quick-break toggle mechanism . . . "De-ion®" arc quenchers . . . Bonderized enclosure.

Get the advantages of this fine starter. Act now. Fast service. Phone your Westinghouse representative today. J-21673

IMMEDIATE ACTION

Westinghouse Electric Corporation
P. O. Box 868
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Send complete information on following:

- ☐ Lint-Free Motor — DB-3800-2
- ☐ Loom Motor — DB-3800-1 "CSP"
- ☐ Loom Motor Starter — B-5256 and DB10-100-1

Name_____

Company_____

Address_____ City_____ State_____

Killing STATIC is not enough

If you can't say "YES" to these questions, your present anti-static agent is doing only half its job.

★ Does it spread evenly and thoroughly, covering all capillary surfaces of fibers or filaments?

★ Does it establish a uniform coefficient of friction, imparting equallized fiber-to-fiber cohesion?

★ Does it insure absence of gumminess involving aprons and card clothing?

★ Does it give you freedom from yellowing? Rancidity? Corrosive effects on mechanical parts?

★ Does it scour out readily and completely?

★ Is it balanced to do your job?

You can expect these "extras" and others, when you use Nopco "balanced" anti-static chemicals.

Reg. U. S. Pat. Off.

Whether it be wool, worsted, cotton, silk, rayon or nylon, Nopco textile chemicals are enabling manufacturers to profit by economies in processing, and obtain superior products. If you are not already using Nopco Anti-Static Agents, it will pay you to investigate. We'll gladly make recommendations based upon your specific requirements.

NOPCO* "Balanced" Anti-Static Chemicals

NOPCO 1656-R— *A moisture-free worsted oil applicable to all worsted production systems.*

NOPCO 1056-A— *A vital processing aid for Nylon warp and filling yarns.*

NOPCO FUA— *Widely used wool lubricant. Performs like a soap in wet finishing.*

NOPCO 1125-P— *For Nylon and Orlon yarns for lace manufacture. Prevents graphite contamination.*

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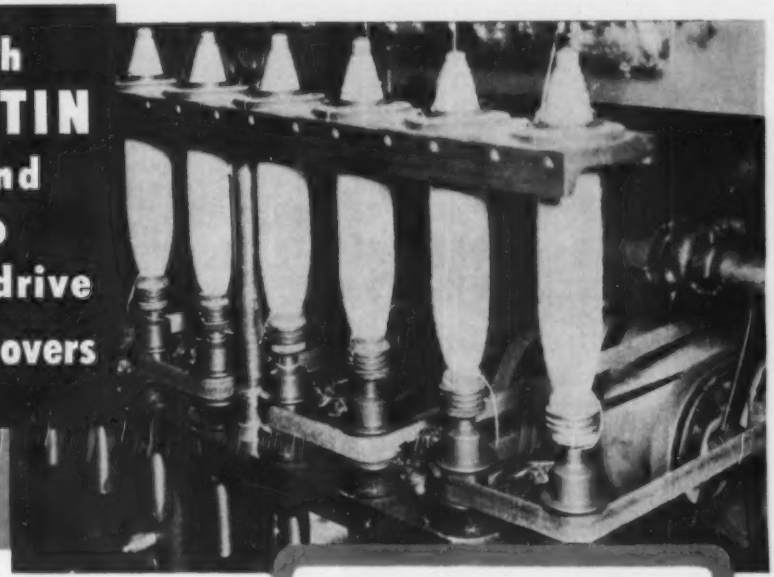
MODERNIZE

your band drive spinning frames . . .

with WHITIN band to tape drive changeovers



View showing spindles, tape tension pulleys and cylinders applied to a Whitin Model "A" spinning frame.

Is your mill one of the many still operating old band-driven spinning frames — frames that may still be structurally sound but admittedly non-competitive and inefficient by today's standards? Do you know that they can be modernized to make them competitive once again — and at a very moderate cost?

Whitin band to tape drive changeovers have been installed in many mills on various makes of frames and are paying big dividends in greater machine efficiency, better yarn quality and lower operating and maintenance costs. Our Repair Sales Departments in Whitinsville, Mass. and Charlotte, N. C. will be glad to furnish figures based on surveys of your particular requirements.

You benefit *9 WAYS* because you get—

- Improved yarn quality
- More even twist
- Increased breaking strength
- Lower maintenance costs
- Slower cylinder speeds
- Increased spindle speeds if desired
- Less noise and vibration
- Increased frame efficiency
- Modern machine engineering

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, N. C. • DEXTER, ME.

Modernize-

...with Variable Speed Drives

To get the most out of your mill, add low cost, dependable *TEXROPE* Variable Speed Drives

THE SIMPLE ADDITION of new variable speed drive equipment has helped greatly in bringing mills, like the one shown here, back into the competitive picture Best of all, the cost is moderate.

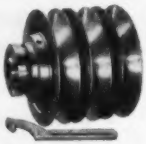
Engineers experienced in textile mill drive applications can help you study your set-up and variable speed drives can answer your needs.

Whether you need to change speeds while your machines are shut down or in motion, there's a *Texrope* variable speed drive for the job. You'll like these drives for their quick, easy and accurate speed changing; silent operation, and smooth cushioned starts that reduce thread breakage.

Texrope drive engineers are well qualified to advise you. They have the added skill that comes from having made more industrial V-belt installations than any other manufacturer.

In addition, the *Texrope* drive line offers everything you need in V-belt drive components. Call your nearby Allis-Chalmers District Office, or write, Allis-Chalmers, Milwaukee 1, Wisconsin. A-3382

VARI-PITCH SHEAVES

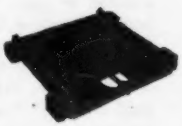


Vari-Pitch Standard sheaves have speed range of 9% to 28% . . . use A, B, C, D, or E belts, *Wide Range* sheaves have 2 to 1 speed range . . use Q and R belts. Both available in stationary and motion control types.

VARI-PITCH SPEED CHANGERS

You get smooth, accurate speed control at the turn of a handwheel. You operate your machine at exactly the right speed for highest production. Enclosure keeps lint and dirt out of speed changing mechanism. Stepless speed range 3¾ to 1. Capacity 1½ to 75 hp

TEXSLIDE MOTOR BASES



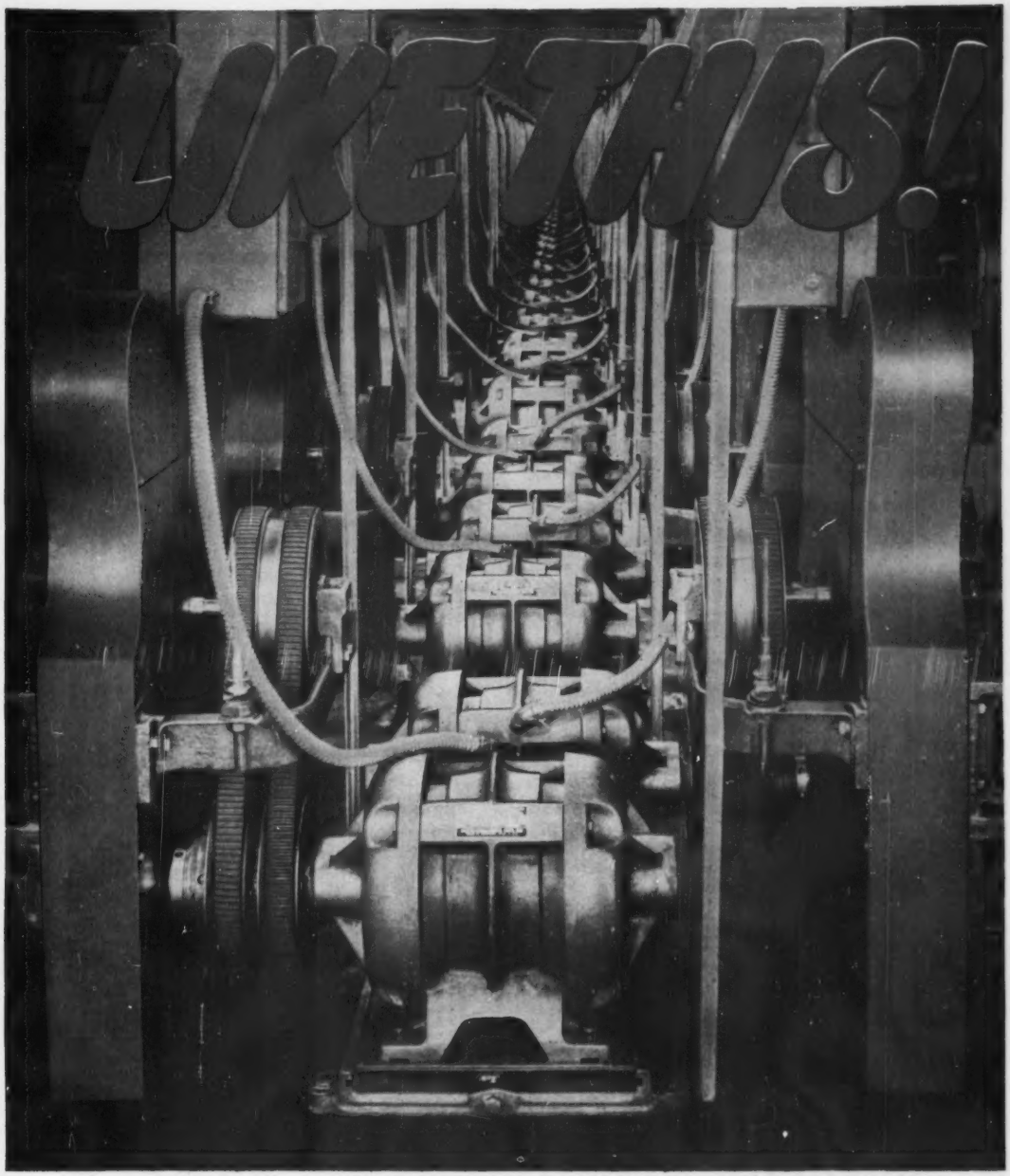
These bases are used only with wide range *Vari-Pitch* drives, since wide range drives require considerably more take-up than standard *Vari-Pitch* drives. The base provides adequate movement to compensate for belt stretch and for changes in center distance when adjustments of pitch diameter are made. It consists of plate sliding in machined slots.

TEXROPE
Greatest Name in V-Belt Drives

Texrope, Vari-Pitch and Texslide are Allis-Chalmers trademark.

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry



COMPLETE SERVICE from power line to machine

Transformers

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A-C ALLIS-CHALMERS

NON-FLUID OIL

TRADE MARK REGISTERED

You Don't Need An Expert When You Use NON-FLUID OIL

Don't be lulled to sleep by the so-called expert theories that one grade of lubricant sold on a "specification basis" will be the answer to all your lubrication problems. *Don't you believe it!* There are just too many variables, such as temperature, humidity, operating speed and age of machine, to have one lubricant satisfactorily lubricate *all* of even just one type of textile machine.

Effective lubrication is obtainable only when the lubricant remains in the bearings. The yard stick that measures this effectiveness is performance and performance only.

NON-FLUID OIL is a specialty lubricant, and sold only on performance standards. Its superiority over "straight run specification" oils and greases made it a target for all oil and grease companies to shoot at.

There's a grade of NON-FLUID OIL for every one of your textile machines in their present condition. "Service Test" the NON-FLUID OIL grade we recommend right in your own mill. Let it prove its superiority over "straight-run specification" oils and greases. Write for free sample and descriptive bulletin.

NEW YORK & NEW JERSEY LUBRICANT COMPANY

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55th ANNIVERSARY NON-FLUID OIL

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

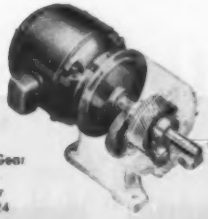
No one speed reducer solves every reduction problem

That's why LINK-BELT builds all 3

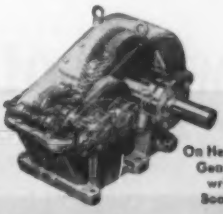
WHETHER it's a helical, a herringbone or worm gear drive that best fits your needs—you get an unbiased recommendation, an incomparable product from your Link-Belt power transmission engineer.

That's why Link-Belt builds all three; has no axe to grind. You can be sure you get the one that suits all your requirements for ratio, space, shaft position, shock loading and many other factors. Precision-engineered for quiet, economical power transmission, all Link-Belt drives will give you long service under the toughest operating conditions.

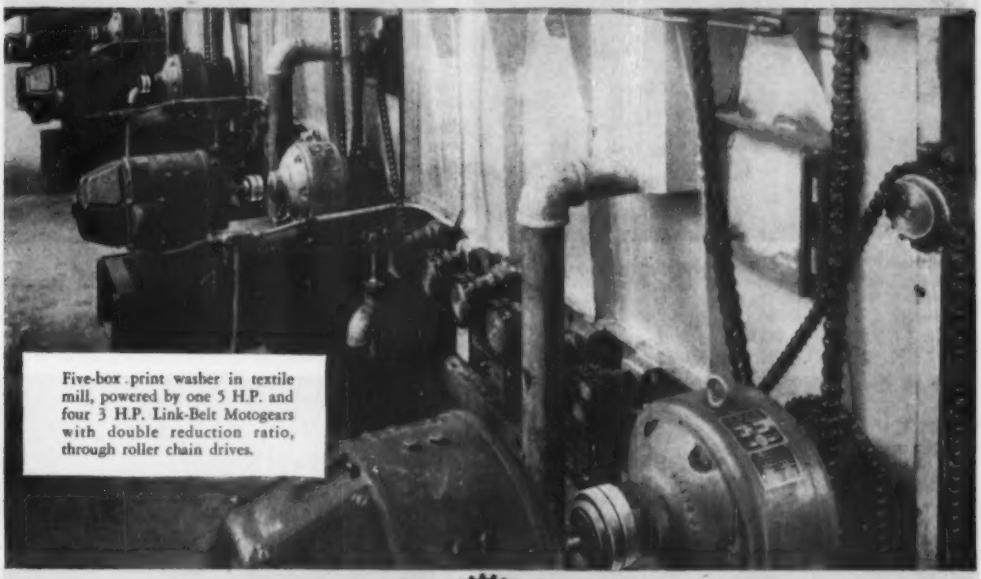
On Worm Gear Drives write for Book 2324



On Gearmotor and Helical Gear Drives write for Book 2247



On Herringbone Gear Drives write for Book 2419

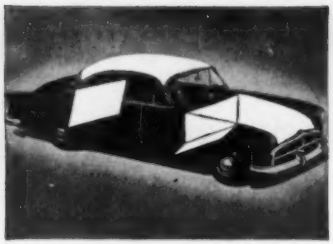


Five-box print washer in textile mill, powered by one 5 H.P. and four 3 H.P. Link-Belt Motogears with double reduction ratio, through roller chain drives.

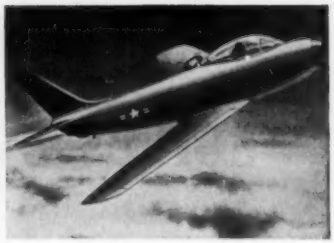
LINK-BELT
ENCLOSED GEAR DRIVES

LINK-BELT COMPANY: Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in principal cities.

Automobile tops, insulated with L·O·F Fiber·Glass against heat and cold, increase passenger comfort. Easy installation. Light weight. Won't deteriorate under normal conditions.

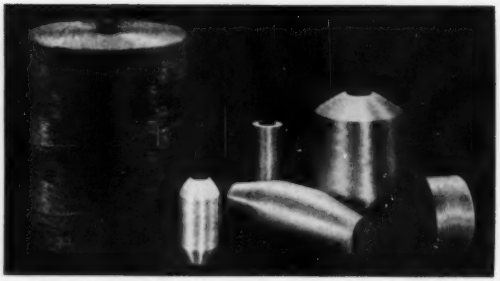


Automobile sound insulation a made-to-order job for L·O·F Fiber·Glass. Easy installation in doors, under the dash, on the fire wall, under the hood. Low moisture absorption, light weight.

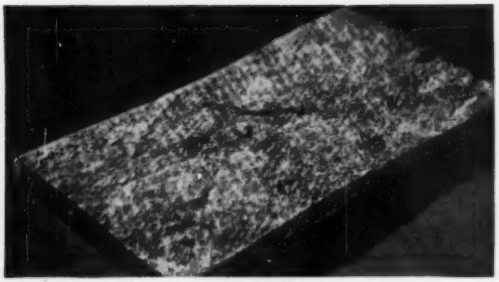


Aircraft sound and thermal insulation. Get these advantages of L·O·F Fiber·Glass. Light weight (as low as .3 lb. per cu. ft.). High fire safety. Low moisture pickup. High sound-insulating efficiency.

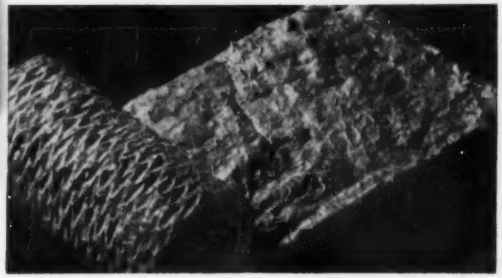
Proven glass technology plus now devoted to early production



Continuous Fiber Textile Yarn—150 series for many uses, such as electrical insulating tape, sleeving, cloth, roving, and paper reinforcement. Glass fibers have enormous tensile strength . . . 250 thousand pounds per square inch. High dielectric strength. Withstands temperatures up to 800°F.

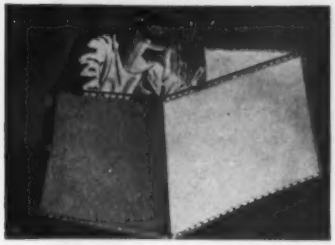


Super-Fine "B" Fiber—Splendid thermal- and sound-insulating qualities. Fiber diameter, .00012″. Temperature range –0°F. to plus 450°F. Standard roll widths, 18″, 24″, 36″, 72″, in 100′ and 200′ lengths. Other widths and lengths also available in a range of thicknesses and densities.

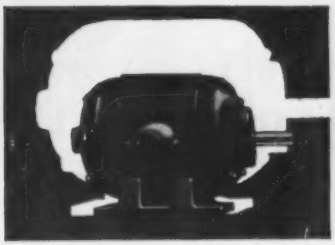


Super-Fine "AA" Fiber—primarily for aircraft insulation. Thickness, .5″ with density of .6 lb. per cu. ft. Fibers of incredibly small diameter—.00004″. With plastic binder to hold dimensional form. Roll widths, 36″, 72″, in 50′ standard length.

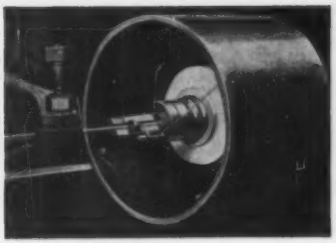
Roving, Chopped Strand and Textile Yarns—for reinforcing of plastics, paper, cloth and paper tape, etc. Enormous tensile strength. Won't shrink or stretch. Won't deteriorate under normal conditions. Versatile in application.



Industrial fabrics woven from Fiber·Glass are fine, safe, strong, rot- and mildew-proof. Ideal applications are tarpaulins, flame shields, airplane cloth, reinforcement for plastics.



Electric motors and generators insulated with L·O·F Fiber·Glass withstand heavy overloads. Appreciable space factor advantages! High dielectric strength.



Wire and cable can be served directly with L·O·F Fiber·Glass textile yarns using standard machines. Yarn also ideal for weaving tape, and braiding on wire and into sleeving.

fine, new facilities of L·O·F FIBER·GLASS!

Aviation, automotive, textile and electrical industries first to benefit from new, high-quality source of supply being readied by Libbey•Owens•Ford

HERE IS headline news of *immediate* interest to key men of business and industry.

The resources and advanced technical glass knowledge of Libbey·Owens·Ford are being focused on a new product—L·O·F Fiber·Glass!

With fine, new facilities at Parkersburg, W. Va., placed to serve you quickly, glass technicians of proven ability and experience are getting set to produce top-quality Fiber·Glass products in volume. (See facing page for basic items to be produced. Note above and right for typical applications.)

Across the country, in 24 major cities, L·O·F offices are busy with preparations to give you help on specific uses.

If your company has already discovered the superior qualities of fibrous glass, investigate L·O·F now as a new volume source, worthy of your complete confidence.

If your company now buys other material for electrical insulation, thermal or acoustical insulation, or reinforcing for plastics or paper, L·O·F Fiber·Glass can offer a combination of advantages unmatched by such other materials. This is a chance to benefit from the glass technology and the high standard of quality which you have come to expect from L·O·F!

For technical data, or engineering consultation on Fiber·Glass uses in your business, call your local L·O·F office—or write, wire or phone Libbey·Owens·Ford, Dept. F·G 105, Nicholas Bldg., Toledo 3, Ohio.

Plastic reinforcing, as in this bread tote tray, presents many possibilities with L·O·F Fiber·Glass. Remarkable strength. Won't dent or lose shape. No discoloration of plastic material. Exceptionally long life.

Paper and paper tape reinforced with L·O·F Fiber·Glass can be raised in tensile strength to equal aluminum or even steel! Either Fiber·Glass textile yarns or scrim mesh are suitable. Investigate!

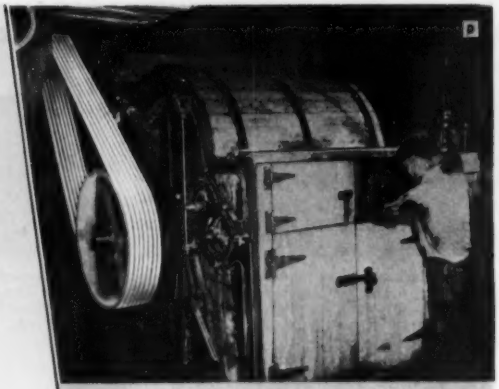
LIBBEY·OWENS·FORD GLASS COMPANY

FIBER·GLASS DIVISION

L O F FIBER·GLASS

FIBER·GLASS

Prove for yourself why Gates Vulco Ropes are giving you longer V-Belt Wear!



Fulling Mill in Glen Woolen Mills, Inc., Norwich, Conn., driven by Gates Vulco Ropes. Albert Stott, Master Mechanic says, "This is the complete answer to the Fulling Mill Drive problem on heavy duty cloth... production has been greatly increased and considerable savings in maintenance costs realized!"

There is a very simple reason why Gates Vulco Ropes—the V-belts built with *concave sides*—are giving you substantially *longer wear*—and you can easily prove this for yourself in just 2 minutes' time!

Pick up *any* V-belt whatever and bend it as it bends when going around a pulley. As the V-belt bends, grip its sides with your fingers—and here is what will happen, every time.

If the belt you are bending is a *straight-sided* V-belt, you can *feel* its sides *bulge out* as the belt bends. This out-bulge forces the sides of the belt to press *unevenly* against the V-pulley—as shown in figure 1-A (see accompanying diagrams).

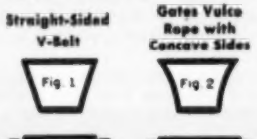
Clearly, this *uneven pressure* against the V-pulley causes the belt to wear *unevenly*—with the wear *concentrated* where the bulge is greatest—and this concentrated wear at one point naturally shortens the life of a *straight-sided* V-belt.

Now, make this same test with the belt that is built with Concave Sides—the Gates Vulco Rope!

Whereas you felt an *out-bulge* when you bent a belt with straight sides, you find that the *Concave Sides* merely fill out and become *perfectly straight*. The sides therefore *press evenly* against the V-Pulley. This distributes the wear *uniformly* across the *full width* of the belt. Naturally, this means longer belt life and *lower* belt *costs* for you!

Only V-Belts made by Gates are built with concave sides. Whenever you buy V-Belts, be sure that you get the V-Belt with the Concave Sides—The Gates Vulco Rope!

What Happens When a V-Belt Bends



How Straight-Sided V-Belt Bulges in Sheave Groove. Sides Press Unevenly Against V-Pulley Causing Extra Wear At Point Shown by Arrows.

The Concave Sides Fill out to a Precise Fit in the Sheave Groove. No Side Bulge! Sides Press Evenly Against the V-Pulley—Uniform Wear—Longer Life!

CD-5110

Gates — Hose · V-Belts · Molded Rubber Goods for Industry

VULCO ROPE DRIVES

ENGINEERING OFFICES AND JOBBER STOCKS IN ALL INDUSTRIAL CENTERS

THE GATES RUBBER COMPANY • DENVER • U•S•A

World's Largest Maker of V-Belts

NOW ON HAND

Integral Horsepower Electric Motors—conforming strictly to NEMA SPECIFICATIONS
¾ to 200 hp.
1-phase and 3-phase
FULLY GUARANTEED

AVAILABLE IN THE FOLLOWING TYPES:

- ★ **Open Drip Proof Motors**
- ★ **Totally Enclosed Fan Cooled Motors**
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  - Style "C" Face Mounted
  - Style "P" Vertical Solid Shaft
  - Vertical Hollow Shaft
- ★ **Adjustable Speed Schrage Motors**

MOTORS EXCEEDING 200 HP. BUILT TO ORDER

Today, world-famous ACEC electric motors are not only *immediately available* to American customers from warehouses in the United States, but ACEC SERVICE is available from Maine to California, from Washington to Florida.

232 DISTRIBUTORS AND MOTOR SERVICE SHOPS, throughout the nation, are fulfilling the service requirements of ACEC customers promptly and efficiently. *Every* user of ACEC products has the assurance that he can call upon skilled, dependable workmanship to maintain his equipment in perfect running order.

As a designer and manufacturer of electric motors, ACEC has established a world-wide reputation for excellence, and it is the set policy of the management that in matters of performance, promptitude, and courtesy the ACEC SERVICE DIVISION shall continue *unsurpassed*.

Whatever your electric motor requirements, write, wire, or telephone the nearest ACEC office or representative — or communicate directly with us in New York. Inquiries and orders receive immediate attention.

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Part of SARGENT's Research Laboratory, Specifically designed to help solve drying problems for Industry.

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any mill condition and any stock condition can be duplicated, to determine:

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3. Air flow data
4. Required temperatures
5. Required heating surface
6. Dryer length and design
7. Apron or roller (feeding) speed
8. Exact development of drying curves required.
9. Possible simple changes in stock preparation prior to drying, to attain maximum quality and efficiency.
10. Controls required to maintain quality and quantity drying in uniform, continuous production.

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C. G. SARGENT'S SONS Drying Research Laboratory for Industry is staffed by men who KNOW their jobs. They have the mental curiosity of the true scientist combined with the dollars and cents, how-can-it-be-done-to-keep-quality-up-and-cost-down outlook of experienced mill men. Here is an invaluable source of experience and knowledge, to serve you and your industry. Wherever a drying process occurs, from food to plastic, textiles to rubber, paper to paint, SARGENT'S Drying Research Laboratory is highly qualified to serve, advise, recommend, and design special drying equipment.

Bring us your drying problems — the more difficult they are, the better we like them!

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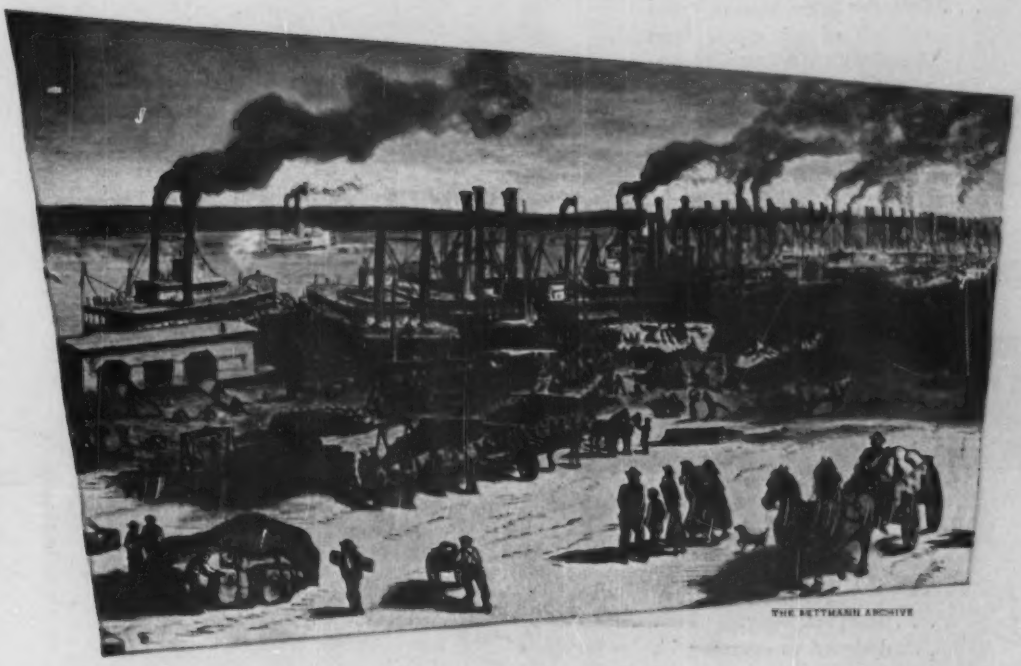
Graniteville, Massachusetts

SINCE 1852

River steamers swell the volume of trade with expanding markets in the south and west.

THE ISELIN DIARY, 1871



To market, to market...

Spurred by steamboat, team and rail, the growing bustle and volume of trade in 1871 added countless financial, credit and collection details. To help manufacturers with these problems, Iselin brought a service already 63 years old . . . Today, nationwide marketing burdens you with even more routine. Iselin's service speeds turnover of your working capital, ends credit losses, frees you of unproductive details . . . Our methods are proved by time and the success of our clients. Let them help you to market successfully. Send for booklet on our Factoring service to industry.

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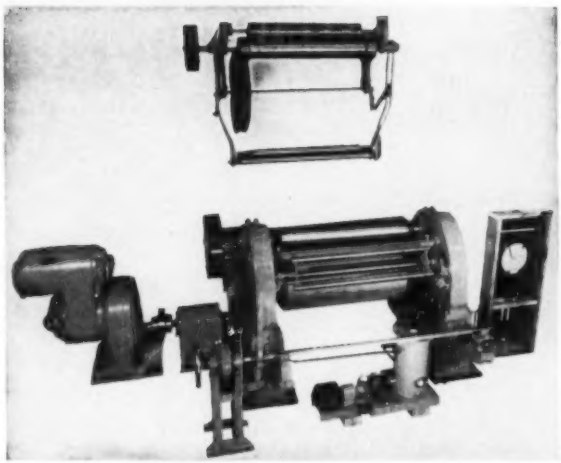
We've Named These "Appleton" --you'll call them "America's Finest"

. . . Two Roll Embossing Calender . . . compact, ruggedly built . . . designed to operate with a minimum of power and maintenance . . . offers these features — 10" Bored Steel Roll, 20" APPLETON Special Wool Felt Roll, Air Pressure Cylinder with Recording Chart, Anti-Friction Bearings, Force Feed Oil Lubrication, Ceiling Folder, Direct Motor Drive with Variable Speed. Truly "America's Finest".



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Custom Builders of Textile Finishing Equipment - Friction Calenders
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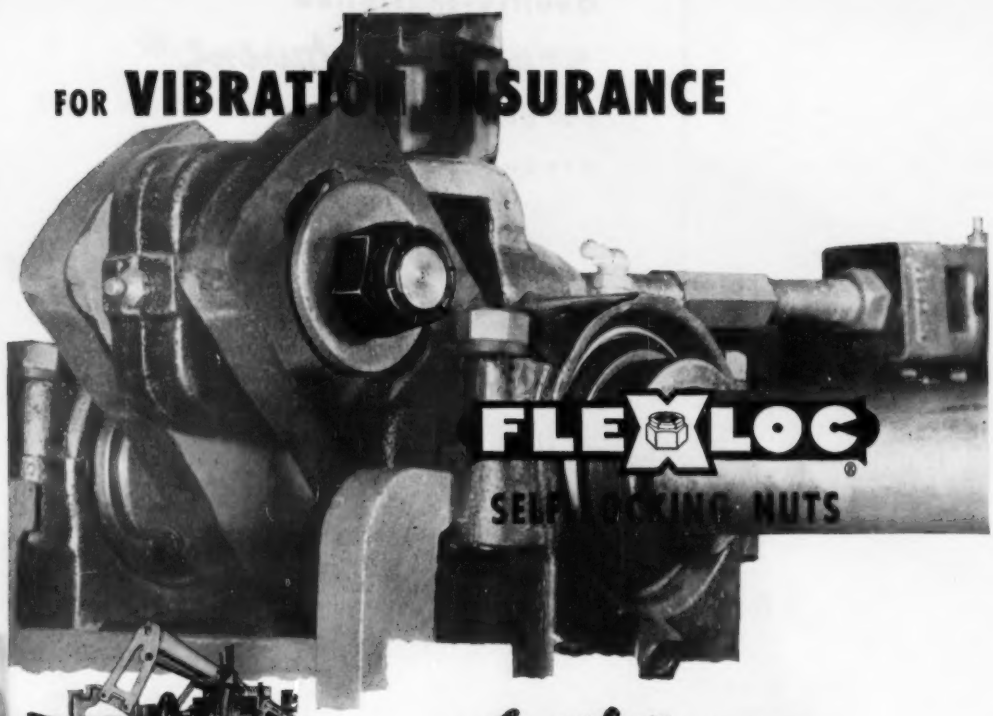
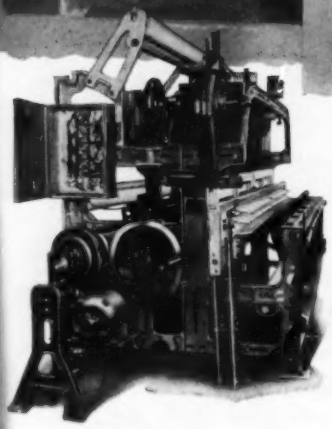


ON *Fletcher* LOOMS



The adjustable throw cranks of the Fletcher High Speed Ribbon Loom are accurately and securely held in position by FLEXLOC Nuts. These cranks are subject to heavy loads at speeds of 200 to 225 RPM. In this difficult application FLEXLOCs have been successfully used since 1946.

The crankshafts on Fletcher High Speed Narrow Fabric Looms *must stay tight*—that's why FLEXLOCs are used to fasten them. FLEXLOCs not only provide *vibration insurance*, but they *promote uninterrupted production* and *cut maintenance costs*.

FLEXLOC also feature: *one-piece, all-metal construction*—nothing to work loose or forget and no serious temperature problem; and *resilient, automatic locking sections* — processed by our patented method to provide closely controlled torques.

Convince yourself of the VIBRATION INSURANCE provided by FLEXLOC! Test-run them on your own product, let us know what size you need and *we'll send samples* with our latest literature promptly.

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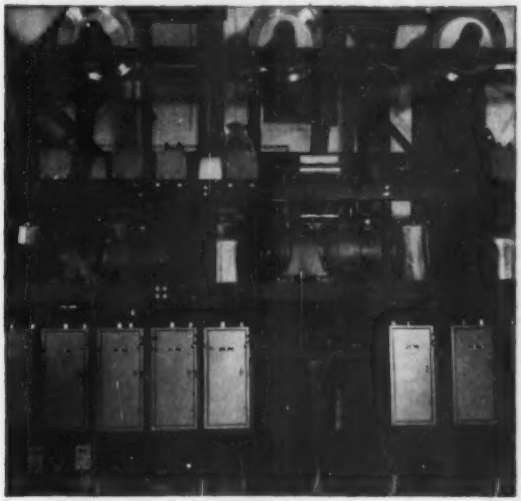
STANDARD PRESSED STEEL CO.
JENKINTOWN 35, PENNSYLVANIA

NEW BLEACHING UNIT FEATURES G-E ADJUSTABLE-SPEED DRIVE



General Electric ACA gear-motors provide efficient, economical low-speed driving power for this "junior" bleaching range, with speed adjustment over a 3:1 range. G-E combination magnetic starters are mounted below.

Individual Sections Driven by ACA Gear-motors for Flexibility, Continuity

Here's good news for textile plants who have been looking for an inexpensive means of switching from batch to continuous bleaching, but whose requirements don't justify the big equipment investment in a large type of bleaching range. A complete, smaller bleaching range (called a "Junior Bleaching Unit"), with General Electric adjustable-speed ACA gear-motor drive for each section, has been developed by the H. W. Butterworth & Sons Company in Philadelphia. This new unit provides efficient, flexible operation for those plants who bleach relatively small amounts of various types of fabrics.

The ACA gear-motor with 3:1 speed range and simple, inexpensive push-button control provides an efficient, economical solution to driving this versatile new unit. Motor speeds can be quickly and easily adjusted to handle various types and weights of cloth. Each section in the range has ample cloth storage space so that no automatic speed co-ordination is required of the motors.

Your supplier can probably give you the complete story on the new Butterworth Range. For more details on how adjustable-speed drives help increase output and reduce costs, just mail the coupon below.

WHICH DRIVES ARE BEST FOR YOU?

This 26-page manual will help you decide. It shows you how to go about selecting the *right* drive. The handy drive chart included is worth your detailed study. Bulletin GEA-5334. Check here ☐

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THE ACA MOTOR—*Speed ranges to 20:1*—An adjustable-speed a-c motor. Speed range 3:1 or 4:1 continuous; for intermittent operation from 6:1 to 20:1. Bulletin GEA-4883. Check here ☐

THE SPEED VARIATOR—*Speed ranges to 40:1*—An adjustable-voltage d-c drive that uses a-c power. Speed ranges 8:1 to 40:1 and beyond. Bulletin GEA-5335. Check here ☐

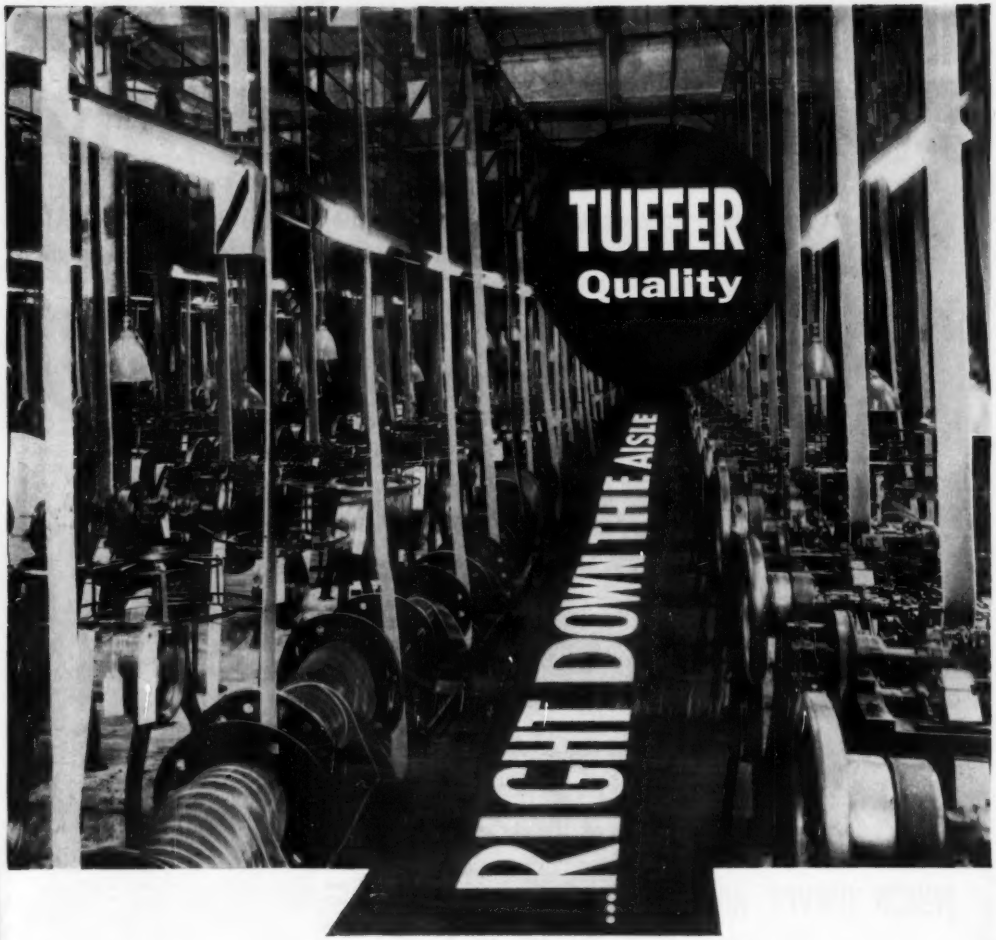
THY-MO-TROL*—*Speed ranges to 100:1*—The most accurate, most versatile, and fastest acting of all G-E adjustable-speed drives. Speed ranges of 100:1 or better. Bulletin GEA-5337. Check here ☐

ELECTRONIC SPEED VARIATOR—An electronically controlled version of the Speed Variator that offers most of the features of Thy-mo-trol for applications in the 15 to 60-hp range at moderate cost. Bulletin GEA-5336. Check here ☐

** Thy-mo-trol is the General Electric Company's registered trademark for its electronic motor-control system.*

Headquarters for ELECTRICAL ADJUSTABLE-SPEED DRIVES

GENERAL ELECTRIC



Here you see our exclusive Tufferizing Process at work . . . turning out Tuffer Card Clothing with a degree of precision and uniformity heretofore unknown in the manufacture of card clothing.

These machines and the Tufferizing Process were developed in our own engineering department . . . where the search for better ways to make better card clothing is continuous.

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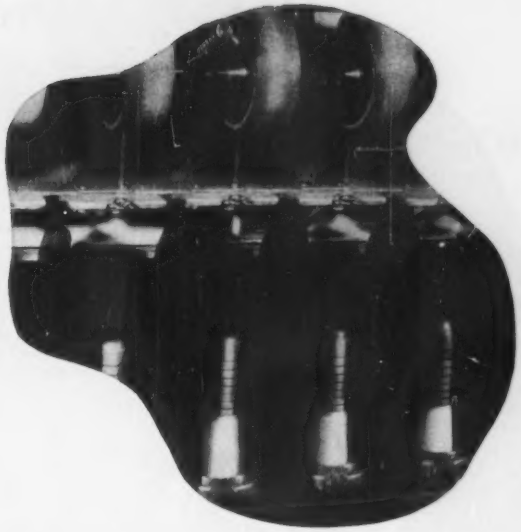
TUFFER CARD CLOTHING **IMPROVES PRODUCTION ALL ALONG THE LINE**

Now use SYTON with blends



Syton Produces Greater Yarn Strength In Wool Blends

You've already found Syton, Monsanto's silica dispersion, a profit-booster in woolen and worsted spinning...

Now... mill trials prove Syton just as advantageous with blends. Smooth rayon staple behaves more like serrated wool fiber when Syton is applied to control inter-fiber slippage. And the proof is in the spinning. Sytonized wool-rayon yarn is 10%-30% stronger; and ends down are fewer—and with Syton you can spin finer counts on all blends, or use *less* twist and get equal yarn strength.

These, and other real advantages, mean *many* production savings all along the line—more profit despite rising costs. You'll want to put Syton to work for you... in your plant. So send the handy coupon below for full information.

For full information on Syton,* Sterox 6* for wool scouring, and other Monsanto textile chemicals such as Stymer,* for rayon slashing; Merlon* resins for durable finishes; Resloom,* for washability and wrinkle resistance; Sted,* for cleansing and scouring action; Catalyst AC for curing melamine and urea resin finishes; Dye fixatives; Rezgard,* fugitive-type flame retardant—check and return the coupon.

*Reg. U. S. Pat. Off.

MILL A—55-45 wool-rayon blend. Applied 1.5% Syton to wool stock; then blended before carding. Front roll speed increased from 105 to 139 r.p.m.—resulting in over 30% increase in production.

MILL B—50-50 wool-rayon blend. Applied 2% Syton, 3% oil emulsion. Stock carded well and was spun to 3⅛ run yarn. Tensile strength increased from 75 to 89 lbs.—a gain of 18%.

MILL C—80-20 wool-nylon blend. Applied 2% Syton, 4% oil to wool stock; then blended with nylon. Overseer attributed improved spinning to uniformity of sliver and yarn.

MILL D—50-50 wool-Dynel blend. Applied 1% Syton, 2½% oil (based on weight of wool) to blended stock. Spun to 6 run. Good control of fibers, smooth, uniform yarn noted.

MILL E—50-50 wool-viscose blend. Applied 1½% Syton, 3% oil to wool; then blended with rayon. Mill had used Syton for 18 months on blends, including virgin and carnetted wool, acetate, viscose, and nylon, with consistently good results.

MONSANTO
CHEMICALS—PLASTICS

SERVING INDUSTRY...WHICH SERVES MANKIND

MONSANTO CHEMICAL COMPANY, Textile Chemicals Dept.,
DeskTWT-44, Everett Station, Boston 49, Mass.

Please send me information on: ☐ Syton ☐ Sterox 6 ☐ Stymer ☐ Merlon ☐ Resloom ☐ Sted ☐ Catalyst AC ☐ Dye fixatives ☐ Rezgard

Name & Title _____

Company _____

Address _____

City, Zone, State _____

Century Textile motors are ruggedly built for long service life.

Century's

TEXTILE MOTOR SHEDS LINT

• STREAMLINE DESIGN
• COOLING AIR FLOW

-677

Smooth clean air passages permit cooling air to enter the motor through the end brackets. This steady blast of air circulates near the bearings, around the windings and out through the adequate air passages in the frame.

Lint and textile dust pass through the motor readily, without clogging. This results in clean radiation surfaces, which means that the motor operates at normal temperature.

Century Ball Bearing Textile Motors are lubricated at the factory for the life of the lubricant — under normal service, this is several years without re-lubrication.

However, evaporation or oxidation due to high temperature determines the ultimate life of the lubricant. Century construction permits re-lubrication, when required, without dismantling.

In addition to textile motors, Century builds a complete line of electric motors in sizes from ⅛ to 400 horsepower. They are available in open rated drip proof, splash proof, enclosed fan cooled and explosion proof frames to meet any atmospheric hazard.

For complete information, including dimensions and prices, write today.

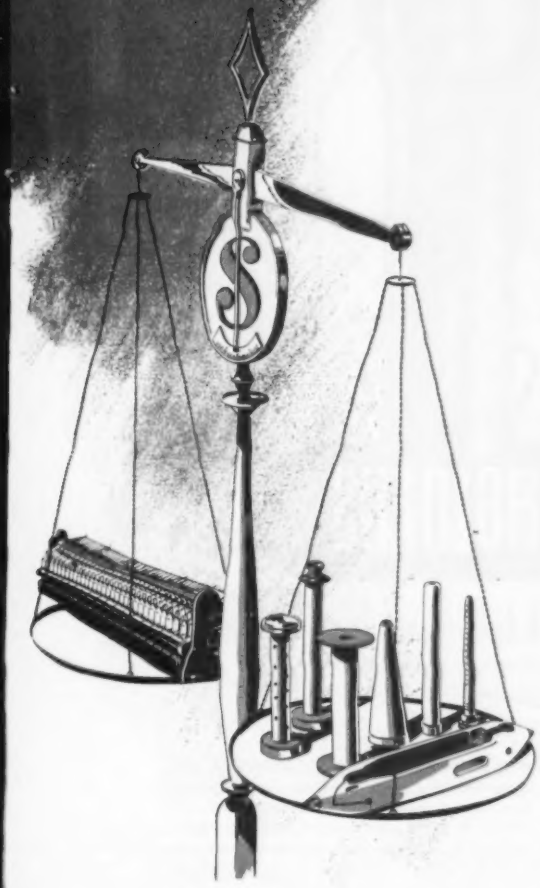
Century Electric Company is celebrating its 50th year in the electrical industry.

Century C MOTORS

CENTURY ELECTRIC COMPANY

1806 PINE STREET, ST. LOUIS 3, MISSOURI • OFFICES AND STOCK POINTS IN PRINCIPAL CITIES

add up the yearly cost and you'll agree . . .



Yarn Carriers, too, are Capital Equipment

Figure it out for yourself. Add up your yearly costs for bobbins, shuttles, and other yarn carriers. Comes to an impressive total, doesn't it? More than you might pay for several units of processing machinery.

The machinery purchase is recognized to be an investment in capital equipment. Alert management selects the product of a reputable manufacturer, with a record for *delivering* the promised efficiency and economy in mill operation.

Too often, because the *individual* cost is small, each purchase of yarn carriers is regarded as a "petty cash" transaction. But when their *collective* cost is considered — as much as $80,000 annually in some mills — you'll agree that yarn carriers, too, are capital equipment.

That's why it's good business to buy bobbins and shuttles with the same sharp eye to reliable source and performance records that you use in buying machines.

And that's where U S specialists can help you. Whether you are equipping a new mill or replacing worn out carriers, talk to a U S sales representative first. You'll find it pays . . . in better yarn and fabric quality, and in lower operating costs.

U S BOBBIN & SHUTTLE CO.

LAWRENCE, MASS. PROVIDENCE, R. I. PHILADELPHIA, PA. JOHNSON CITY, TENN.
GREENVILLE, S. C. CHARLOTTE, N. C. MINNEAPOLIS, MINN.
LOS ANGELES: C. S. Paules, 1782 W. Vernon Ave.
DALLAS: G. T. Daniel, Textile Supply Co.
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

U S owned timber properties permit complete control of wood stock selection and every step in processing, from forest to finished products. Five manufacturing plants, North and South, provide ample facilities to produce and deliver promptly the cost-saving yarn carriers you need, in any quantity.

Anywhere in textile America, you are near the headquarters of a U S specialist in yarn carrier selection. He'll call at your request.

Still on Top!

with the many exclusive performance features that have made

ECLIPSE BOBBIN HOLDERS

THE FAVORITE!

The many exclusive features built into the Eclipse Bobbin Holder have made it the favorite of many leading textile organizations. They have found in actual operation that the Eclipse Bobbin Holder is outstanding in every way, and that the Eclipse reputation for basic quality and goodness is well deserved. If you are interested in modernizing your present plant equipment, you will surely want the finest—and the finest means Eclipse. Investigate today by writing or calling the Eclipse Machine Company direct.

These Features Mean Eclipse Superiority

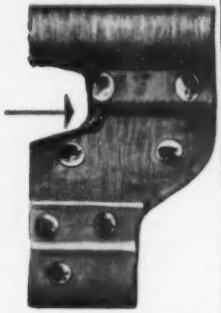
1. Completely replaces wooden skewers.
2. Ball bearings minimize friction, resulting in uniform quality of roving.
3. Permits less twist. Tests indicate yarn of more even texture.
4. Creel boards easily cleaned. Overhead suspension leaves open creels. Blowers more effective.
5. Better spinning of spun rayon.
6. Easier creeling; less physical effort and fewer motions required.
7. Improved brake attachment prevents overrun and backlash.
8. Now cadmium plated and stainless steel balls more rust resistant.
9. Time-tested product—holders in operation for over ten years.
10. Easy to install; practically no upkeep.

Export Sales: Bendix International Division, 72 Fifth Avenue, N. Y. 11, N. Y.

ECLIPSE MACHINE DIVISION of Bendix AVIATION CORPORATION
ELMIRA, NEW YORK

Maintenance Tips for Pickers

In mills using non-reversible drop box with a picker strap, be sure stick bumper is not worn. Worn bunters tend to let the stick jam picker and cause the type of wear shown below.

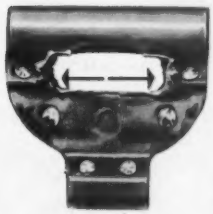


Where reversible drop box pickers are used, watch for these causes of excessive wear:

1. Wear at *front* of picker caused by too much bunter, or bunter on front end of rod that is too hard.

2. Wear at *back* of picker caused by insufficient bunter on front end of rod. This makes the stick stop too quickly and allows the picker to override.

3. If heel spring is too stiff, the picker may be cut at *back* end of the sticker-hole.



NOTE: Garland pickers are designed to give exceptionally long service. Where excessive wear occurs, it is usually due to external factors. We will gladly help you on such problems. Write us, outlining the details, or ask our representative to call.

Eliminate worn or inadequate pickers . . .

SPEED PRODUCTION *with*

Garland

Genuine Rawhide Loom Pickers with 5 BIG FEATURES for better service

1. REINFORCED STICK HOLE

Molded rawhide reinforcements cut down wear, lengthen life of picker.

2. STRONGER PICKER HEAD

A much heavier outside layer of rawhide provides the added strength that means perfect throw throughout the life of the picker.

3. PRESSURE MOLDED

Uniform dimensions are assured by individual pressure molding. Need for filing or fitting is eliminated.

4. IMPROVED SPINDLE HOLE

Hole is perfectly rounded and strengthened by locked-in flanges at both ends. Holes will stay rounded, require no reaming, and will not bind.

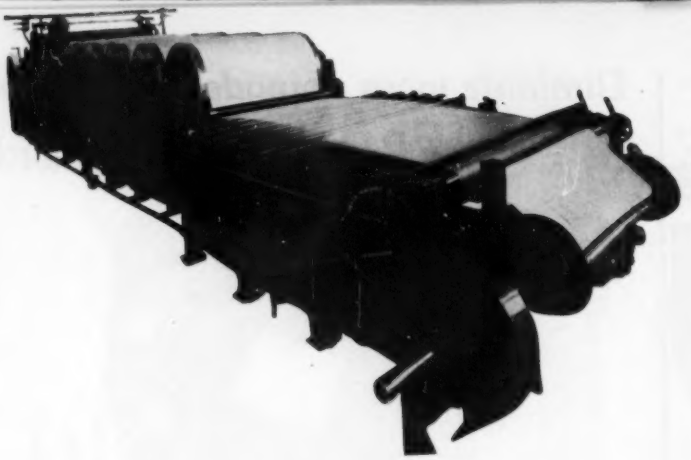
5. FINEST MATERIAL KNOWN

Nothing but Water Buffalo Hide possesses the strength and elasticity to stand up under the terrific punishment of today's high speed requirements and still go easy on shuttles, sticks, and looms.

For complete information on standard and special loom pickers, write on your mill letterhead for the

NEW GARLAND CATALOG

Garland
MANUFACTURING CO.
SACO, MAINE



The Cocker 9-Cylinder High Speed Slasher for cotton, spuns, filaments, and other type yarns.

The Most Modern Slasher in America

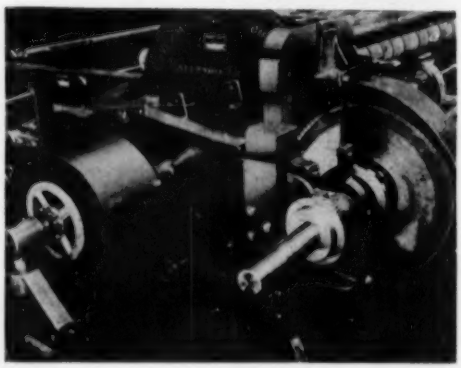
1200 Pounds Production Per Hour

The New Cocker Friction

This machine has the new Cocker Friction . . . an exclusive feature which produces hard beams and gives more yards per loom beam.

Another exclusive feature of this slasher is its Differential Friction Compensating Control which permits high speeds without heating of Friction. This is now and has always been the most modern slasher on the market . . . the first to use Rotary Packless Joints, Individual Traps on each Cylinder, Flexible Hose Connections, Stainless Steel Cylinders, Variable Speed DC Drive, and many other features which are now universally used.

It will pay you to investigate the many valuable features of this most modern of all slashers.

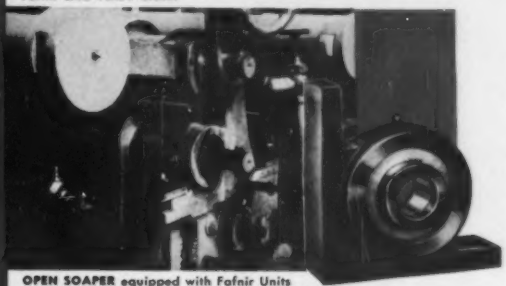


THE LEADER COCKER AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

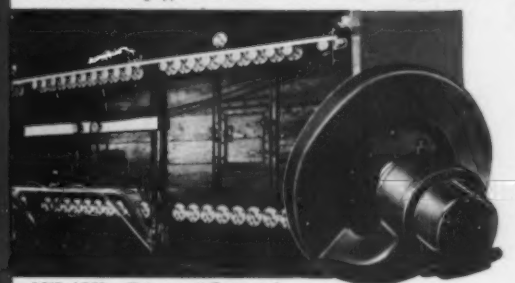
WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

FULLING MILL equipped with Fafnir LAO Pillow Block.

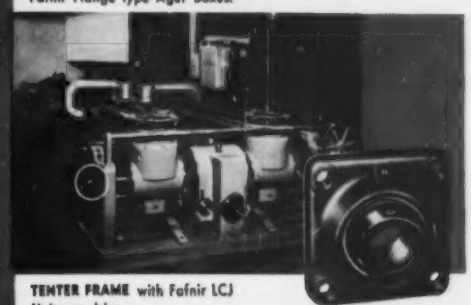


OPEN SOAPER equipped with Fafnir Units on Top and Bottom Rolls. Right angle unit illustrated.

DRY CAN RANGE equipped with Fafnir Dry Can Units. Floating type illustrated.



ACID AGER utilizing specially treated Fafnir Flange type Ager Boxes.



TENTER FRAME with Fafnir LCJ Units on drive.

TURNING POINTS *to timely economies* in Finishing Operations

If you are interested in reducing costs as well as increasing production, take a second look at Fafnir Ball Bearing Textile Units from this angle.

Like other textile mill operators, you may be able to avoid the use of special bearings and their attendant heavy costs by installing Fafnir Textile Units. There are several standard units expressly designed for textile finishing machines. With Fafnir Units, you have no special housings or lubricating systems to consider, no costly machining . . . installation is a matter of minutes, not hours. Where these units have replaced plain bearings, mill men are realizing several timely operating economies . . . lower power consumption, less frequent lubrication, less lubricant, fewer roll settings, a reduction in material spoilage and machine downtime.

Consider AGERS as a specific example . . . Fafnir Textile Units help to make possible a free, uniform pull over the rolls. In addition, these units are designed to retain lubricant in high temperatures. They're made to resist the effects of corrosive atmosphere too . . . thus cutting down on maintenance and replacement costs.

Get aquainted with the complete line of Fafnir Textile Units and its possibilities for producing economies in your plant finishing operations. Write for catalog of Textile Units. The Fafnir Bearing Company, New Britain, Conn.

Other Finishing Machines where FAFNIR Ball Bearings are used

- Printing Machines
- Dryers
- Button Breakers
- Dye Paddles
- Dye Kettles
- Dye Jigs
- Folding Machines
- Starch Mangles
- Squeeze Rolls
- Calender Stacks
- Calender Chasing Rolls

FAFNIR
BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

They did

This North Carolina mill saw the advantages to be gained in terms of increased production and reduced costs through a modernized drive.

what

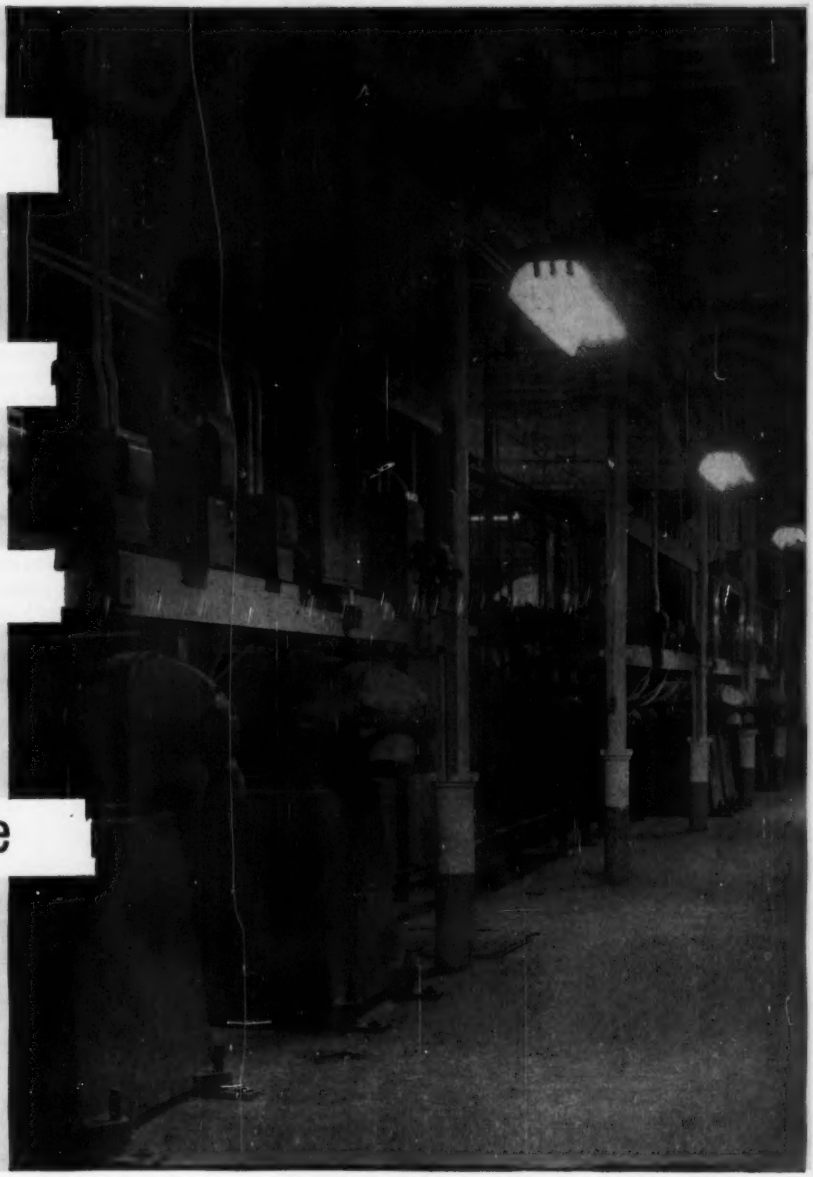
They called in their Westinghouse representative early in their plans to get the benefit of Westinghouse experience with similar installations.

you can do

Do what hundreds of other textile firms are doing. Have Westinghouse work with your engineers and the machinery builder in the application of drives and other equipment to your plant.

to produce more

Whether it's a new drive like this, more dependable and efficient electrical distribution, better servicing or simply the application of a piece of electrical equipment to a tough job, Westinghouse has the answer.



Choose *matched drives* for your finishing machines

That *extra* productive capacity that you want from your finishing machines often depends on "matching" the electrical drive to the textile process and productive requirements of each machine.

Extra production, for instance, can be obtained by running the range at the highest speed that the process and machine will permit. Westinghouse has designed drives that are operating ranges at 375 ypm.

High quality frequently depends on precise speed and tension control. *Low maintenance* is a result of well designed apparatus and the simplest system practical. *Reduced man-power requirements,* particularly important today, depend on the degree of automatic control. This also reduces the human judgment element and helps raise quality. *Versatility,* which permits operating individual sections of a range independently if desired, can be worked into the control system. All of these factors are functions of the drive.

That's why it's important to get a drive that is "matched" to your requirements. This can take the form of a "packaged drive" or of separate components mounted as desired. That's why Westinghouse recommends a thorough study of all factors before a drive is selected.

Your Westinghouse representative will be glad to help with your drive requirements . . . and he is backed by engineers and textile specialists with years of experience in the application of these drives to textile mills. They'll be glad to work with you and your finishing machinery builder on new drive requirements.

NEW FREE BOOK

Here's help, too—this 32-page book gives you factual information about Westinghouse finishing drives. Tells about tension control, cost factors, speed range, operating economies, maintenance features and other vital points. Write for Booklet B-4034, "Westinghouse Equipment for Textile Finishing". Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pennsylvania. J-94843

YOU CAN BE SURE... IF IT'S

Westinghouse

EQUIPMENT FOR TEXTILE PRODUCTION

In easy reach — a high quality supply of card clothing and associated products! From Ashworth's 4 factories, we move supplies through distributing points in 7 strategic textile centers — Atlanta, Charlotte, Dallas, Fall River, Greenville, Philadelphia and Worcester.

To help keep your plant in operation at a high rate of efficiency, Ashworth also maintains 6 carefully located repair shops — set up to furnish prompt repair service, top flat reclothing, lickerin rewinding, etc.

Ask our nearest office to explain Ashworth Free Surveys. To increase your card efficiency, they're worth asking about — today.

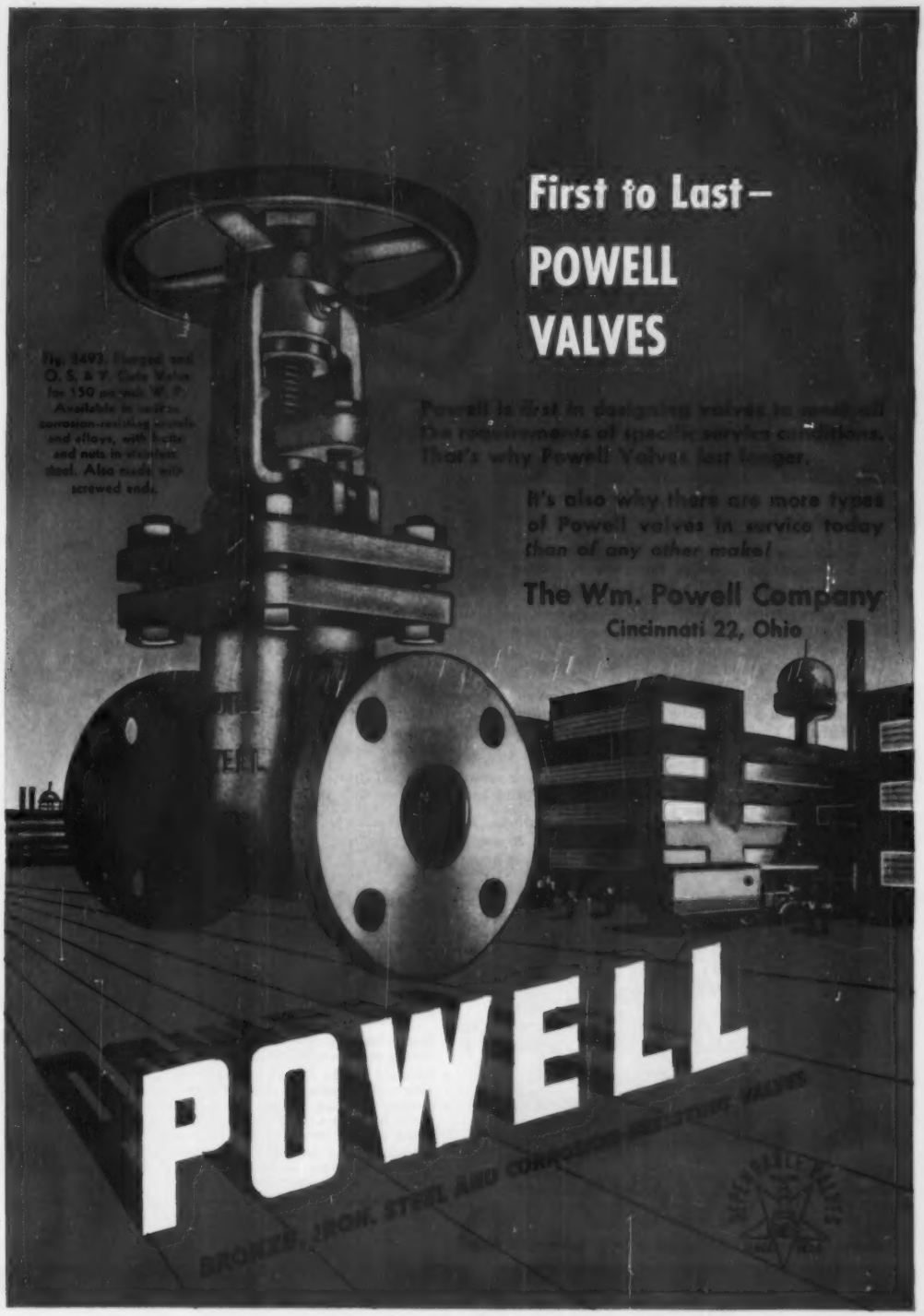
PRODUCTS AND SERVICES

Card Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnett Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Top Flats Reclothed.

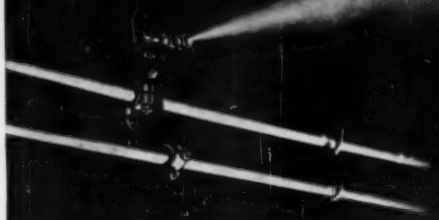
ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River *†‡ Worcester *‡ Philadelphia*†‡ Atlanta†‡
Greenville*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)
Factory* Repair Shop† Distributing Point‡


First to Last—
POWELL
VALVES
Fig. 2493. Flanged and O. S. & Y. Gate Valve for 150 psi-with W. P. Available in cast corrosion-resisting and alloys, with bolts and nuts in stainless steel. Also made with screwed ends.
Powell is first in designing valves to meet all the requirements of specific service conditions. That's why Powell Valves last longer.
It's also why there are more types of Powell valves in service today than of any other make!
The Wm. Powell Company
Cincinnati 22, Ohio
POWELL

NEW! SIMPLER IN DESIGN!



The *IMPROVED*
Automatically Self-Cleaning
AMCO Atomizer, No. 6

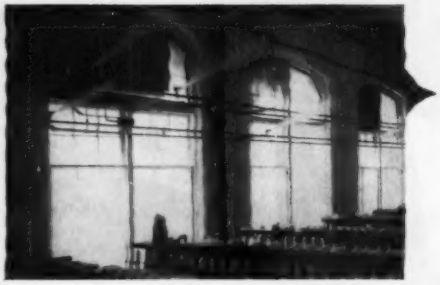
AMCO No. 6 atomizer retains all the time-tested features of the popular No. 5 unit . . . plus additional features which assure improved spray quality. Its better performance and ease of maintenance make this automatically self-cleaning atomizer superior for new installations and replacements.

CONSTRUCTION AMCO No. 6 is made from metals which have proved their resistance to erosion, corrosion and mechanical wear. More rugged construction, fewer parts and greater simplicity in design make servicing easy.

SPRAY A micro-atomizing nozzle produces an exceptionally fine, smoke-like spray which is projected a great distance, intimately mixing with room air. Discharge is adjustable. An entirely new valve action insures positive water shut-off.

SELF-CLEANING The air and water nozzles are automatically self-cleaned each time the compressed air is shut off manually or by humidity control.

AMCO No. 6 conforms to standard specifications. It is interchangeable with AMCO atomizers Nos. 5 and 4 where at least 20 pounds per square inch is maintained on air lines and the water lines are under gravity control.



CHECK THESE PRACTICAL BENEFITS

— yours with

AMCO CONTROLLED HUMIDIFICATION

- Regain maintained—Normal moisture content of fibers retained during processing and in finished fabrics.
- Constant weight of yarn and cloth per given length made possible—yarn counts kept more even.
- Output increased—Static electricity eliminated as a problem. Closer machine adjustments and higher speeds maintained. Materials kept in best condition for processing.
- Product quality improved—Fewer imperfections from pieced-up ends. Stronger, smoother and more uniform fabrics. Yarn and cloth sheen improved.
- Waste reduced—More yarn produced from each pound of raw material. Less broken fibers, dust and fly in product.

AMCO

HUMIDIFICATION • COOLING • AIR CONDITIONING

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC.

from coast to coast, buyers agree...

"Good knitting is good business"

Yes, hosiery buyers the country over agree that good knitting is one of the most important basic qualities in the success of a hosiery brand.

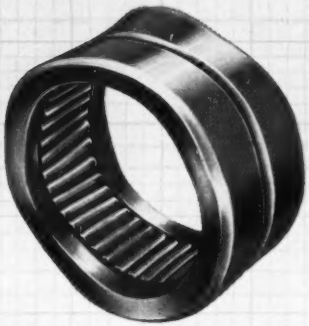
Leading manufacturers everywhere agree, too, for they safeguard the quality of their knitting by using

TORRINGTON

SPRING BEARD NEEDLES · SINKERS · DIVIDERS · SPLIT DIVIDERS

THE TORRINGTON COMPANY, Torrington, Conn., U. S. A.
Established 1866

Branches: New York · Philadelphia · Chicago · Greensboro, N. C. · Boston · St. Louis
Toronto, Can. · *Pacific Coast Representative:* E. G. Paules, 1762 West Vernon Ave.,
Los Angeles 37, Calif. Broadgate House, 7-10 Eldon St., London E. C. 2, England



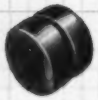
a type and size for every need

Torrington Needle Bearings are available in a wide range of types and sizes to give dependable anti-friction performance in a wide variety of applications.

Needle Bearings are especially suited for high speed rotation . . . or oscillation. They offer high load capacity, small cross-section, good retention of lubricant and long service life for all radial loads.

You can accommodate shafts from 5/32" up—retaining all these advantages. Our engineers will be glad to help you pick the right Needle Bearing for your application.

THE TORRINGTON COMPANY
Torrington, Conn. • South Bend 21, Ind.
District Offices and Distributors in Principal Cities of United States and Canada



TORRINGTON *NEEDLE* BEARINGS

NEEDLE • SPHERICAL ROLLER • TAPERED ROLLER • STRAIGHT ROLLER • BALL • NEEDLE ROLLERS

even distribution

DILEINE SINGLE

A Superior Inhibiting Agent For Processing Jig Dyed Fabrics Does Not Require Pretreatment

The exceptionally slow exhausting properties built into Dileine Single offer you maximum distribution of dyestuffs throughout large rolls of jig processed fabrics.

Dileine Single has unique leveling properties and is exceptionally stable to high temperatures. It offers superior protection against atmospheric fading.

Dileine Single is applied simultaneously with the dyestuffs. No pretreatment what-so-ever is required.

We would welcome the opportunity of sending you further data on the superior properties of Dileine Single along with samples for test purposes.

50th Anniversary 1901–1951

JACQUES WOLF & CO.
Chemicals PASSAIC, N. J.

Passaic, New Jersey Branches: Carlstadt, N.J. • Los Angeles, Calif.

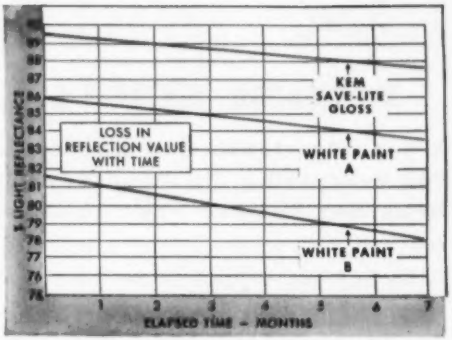
HOW "OLD" is your white paint the day it is applied ?

KEM SAVE-LITE STAYS WHITER, LONGER— BECAUSE IT STARTS WHITER!

Many "white" paints are a year old—or older—*the day they are applied,* in terms of the graying, or gradual loss of light reflective value, that occurs as paint films age.

KEM SAVE-LITE Mill White Finishes *start* whiter, or "newer", and *stay* consistently whiter, year after year, than most conventional white finishes. Proof of this is shown in the comparison of light reflective values of KEM SAVE-LITE and two typical ordinary mill white finishes in the accompanying chart.

Test KEM SAVE-LITE for yourself! See the difference—in initial whiteness—in hiding power—in greater covering capacity! Call your Sherwin-Williams representative for a demonstration, or write The Sherwin-Williams Co., Cleveland 1, Ohio. (Division Offices, Charlotte, N. C. and Boston, Mass.)



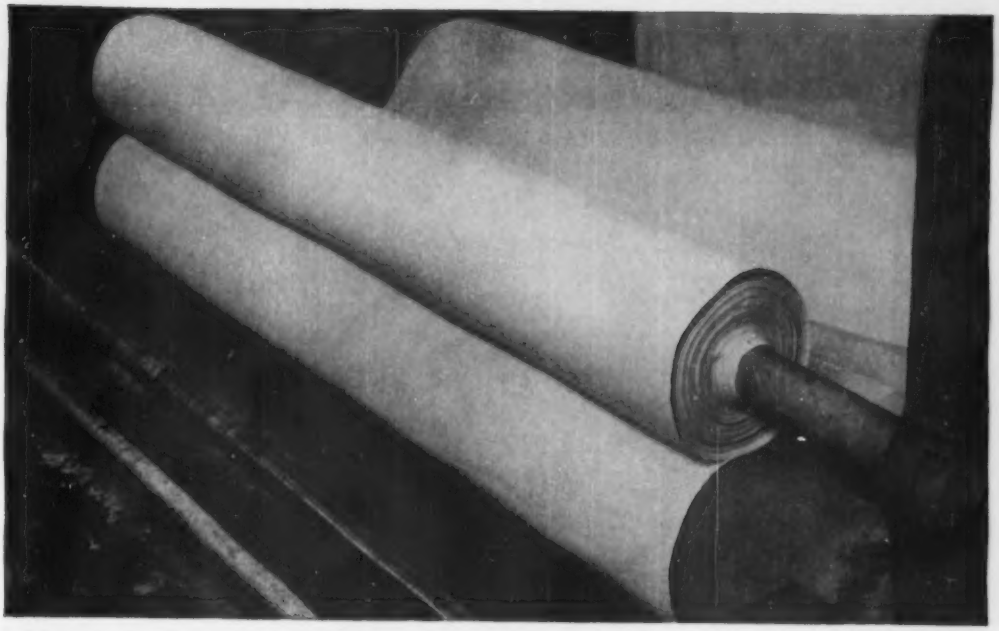
HERE IS PROOF!

Note how the whiteness, or reflective value of SAVE-LITE *starts* higher than conventional finishes when first applied, and *stays* higher throughout its life! This means longer intervals before repainting is required.

SHERWIN-WILLIAMS
INDUSTRIAL MAINTENANCE FINISHES

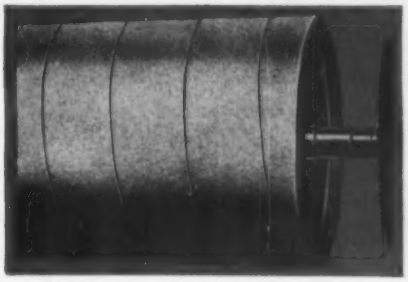
SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES
MILL VILLAGE PAINTS

For more information, write direct or use Reader Service post card.



Stands the test of time

Ten years of running continuously in mills *without evidence of wear* is strong proof of the durability of TEXALOX metalized cloth roll covering. Retaining its distinctive, positive yet gentle gripping action, TEXALOX cloth maintains an even drawing tension in all directions. Will not harm the most delicate of textiles. The metal coated granular surface withstands commonly used chemicals... does not shed... and is readily restored to its original condition.



This dependable, money-saving performance that helps you produce better quality textiles is a sound reason for a trial in your plant. Ask our salesmen or distributor for details. Or write Dept. TW 82-120.

TEXALOX

For take-up rolls, measuring machines, folding machines, knitting machines and other applications requiring a positive friction surface.

Metallized Roll Covering by CARBORUNDUM

TRADE MARK

"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N.Y.

82-120

PERKINS
HOLYOKE
®
Perkins Calender Rolls—
the natural result of the
longest and broadest
experience in the indus-
try—give quality that is
definitely reflected in
your product. Perkins
service includes refills
of any make of calen-
der rolls.
B. F. PERKINS & SON, Inc.
HOLYOKE, MASS., U.S.A.
LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

HYSTER® INDUSTRIAL TRUCKS

are at work in *Every* major industry ...in thousands of businesses

Firms all over the world are slashing materials handling costs with Hyster Fork-type Lift Trucks, Straddle Trucks, Karry Kranes and Turret Trucks . . . Other costs go up but materials handling costs CAN go down.

In 1951 (even exclusive of government orders) Hyster industrial truck volume was the largest in Hyster history. Hyster sales (again exclusive of government orders) are nearly equally divided between present Hyster owners and entirely new owners.

REPEAT BUSINESS means customer satisfaction. NEW BUSINESS proves customer preference.

Here is a partial list of businesses in which Hyster trucks are saving time, money, manpower. If your business is listed, we can give you up-to-date materials handling information. See your Hyster dealer or write direct to us.

- ☐ ABRASIVE MFG.
- ☐ AIRCRAFT & AIRCRAFT PARTS MFG.
- ☐ AIRLINES
- ☐ APPAREL MFG.
- ☐ AUTOMOBILE, TRUCK & BUS MFG.
- ☐ AUTO SUPPLIES & PARTS MFG.
- ☐ AUTO SUPPLIES, PARTS WHOLESALERS
- ☐ BAKERIES
- ☐ BOAT AND SHIPBUILDING
- ☐ BOILER AND TANK MFG.
- ☐ BOTTLING, SOFT DRINK MFG.
- ☐ BOTTLING & BEVERAGE WHOLESALERS
- ☐ BREWERIES, DISTILLERIES, WINERIES
- ☐ BRICK MFG.
- ☐ BUILDING MATERIALS MFG.
- ☐ BUS LINES
- ☐ CEMENT MFG.
- ☐ CERAMIC AND POTTERY MFG.
- ☐ CHEMICAL MFG., GENERAL
- ☐ COMMERCIAL FARMS
- ☐ CONCRETE BLOCK & PIPE MFG.
- ☐ CONCRETE PRODUCTS MFG., GEN'L.
- ☐ CONSTRUCTION, BUILDING, HOUSING
- ☐ CONSTRUCTION, GENERAL
- ☐ CONVEYOR MFG.
- ☐ COOPERAGE
- ☐ COTTON COMPRESS & WAREHOUSES
- ☐ COTTON & TEXTILE WHOLESALERS
- ☐ COTTON OIL MILLS
- ☐ DAIRY PLANTS
- ☐ DEPARTMENT & MAIL ORDER STORES
- ☐ ELECTRICAL EQUIPMENT MFG.
- ☐ ELECTRICAL GOODS WHOLESALERS
- ☐ ENTERTAINMENT, AMUSEMENT FIRMS
- ☐ FARM IMPLEMENT MFG.
- ☐ FERTILIZER MFG.
- ☐ FISH PACKERS
- ☐ FOOD DEHYDRATORS, PROCESSORS
- ☐ FOUNDRIES
- ☐ FRUIT & VEGETABLE CANNERIES
- ☐ FURNITURE MFG.
- ☐ GLASS MFG.
- ☐ GOVERNMENTAL ORGANIZATIONS
- ☐ GRAIN AND FLOUR MILLS
- ☐ GROCERY AND SUPER MARKETS
- ☐ HAND TOOL MFG.
- ☐ HARDWARE MFG.
- ☐ HEATING & REFRIGERATING MFG.
- ☐ LAUNDRIES & BLEACHERIES
- ☐ LEATHER PRODUCTS MFG.
- ☐ LUMBER REMANUFACTURERS
- ☐ LUMBER SAWMILLS & PLANING MILLS
- ☐ LUMBER WHOLESALERS & RETAILERS
- ☐ MEAT PACKERS
- ☐ MACHINE SHOPS
- ☐ MACHINERY & EQUIPMENT DISTR'S.
- ☐ MACHINE TOOL MFG.
- ☐ MACHINERY & EQUIPMENT MFG.
- ☐ METAL & STRUCTURAL STEEL MFG.
- ☐ METAL STAMPERS
- ☐ MINING, COAL
- ☐ MINING, METAL
- ☐ MINING, NON-METALLIC
- ☐ MINING EQUIPMENT MFG.
- ☐ MISC. FOOD PRODUCTS MFG.
- ☐ MOTOR MFG.
- ☐ OIL FIELD EQUIPMENT MFG.
- ☐ ORDNANCE MFG.
- ☐ OXYGEN, ACETYLENE & C.I.S MFG.
- ☐ PAINT & VARNISH MFG.
- ☐ PAPER & PULP PRODUCTS MFG.
- ☐ PAPER BOX MFG.
- ☐ PAPER BAG MFG.
- ☐ PETROLEUM BULK TANK STATIONS
- ☐ PETROLEUM REFINERIES
- ☐ PLASTICS MFG.
- ☐ PLATING & PAINTING
- ☐ PLUMBING EQUIPMENT MFG.
- ☐ PLYWOOD MFG.
- ☐ POULTRY PROCESSORS
- ☐ PRINTING & PUBLISHING
- ☐ PUBLIC UTILITIES
- ☐ RADIO & COMMUNICATION EQUIPMENT MFG.
- ☐ RAILROADS
- ☐ RAILROAD CAR & EQUIPMENT MFG.
- ☐ RUBBER PRODUCTS MFG.
- ☐ RUG & CARPET MFG.
- ☐ SCIENTIFIC INSTRUMENT MFG.
- ☐ SCRAP METAL & JUNK YARDS
- ☐ SCREW PRODUCTS MFG.
- ☐ SEED & FEED WHOLESALERS
- ☐ SOAP MFG.
- ☐ STEEL WAREHOUSING
- ☐ STEVEDORING
- ☐ STOVE MFG.
- ☐ SUGAR & CONFECTIONERY MFG.
- ☐ TEXTILE & APPAREL WHOLESALERS
- ☐ TEXTILE MILLS
- ☐ TOBACCO MFG.
- ☐ TOBACCO WHOLESALERS
- ☐ TRAILER MFG.
- ☐ TRUCK LINES
- ☐ UPHOLSTERERS & MATTRESS MFG.
- ☐ WAREHOUSING & STORAGE
- ☐ WIRE ROPE & CABLE MFG.
- ☐ WOODEN BOX MFG.
- ☐ WOOD PRESERVING PLANTS

HYSTER COMPANY

THREE FACTORIES

2922 N.E. CLACKAMAS STREET, PORTLAND 8, OREGON
1822 NORTH ADAMS STREET . . . . PEORIA 1, ILLINOIS
1022 MEYERS STREET . . . . . DANVILLE, ILLINOIS

HYSTER 20 (2,000 lbs. capacity). One of 5 fork-type models from 2,000 to 15,000 lbs. cap.

HYSTER STRADDLE TRUCK®. Two models of 18,000 and 30,000 lbs. capacity.

HYSTER KARRY KRANE®. Versatile mobile crane with 10,000 lbs. hoisting and transporting capacity.

HYSTER TURRET TRUCK. Horizontal transporting unit. 4,000 lbs. capacity. 4 models.

"...from little acorns grow."

1931 1951

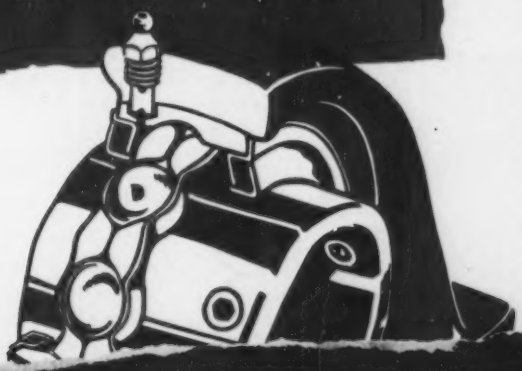
In this our twentieth anniversary year, may we express to our friends in the textile industry, our heartfelt thanks and our humble appreciation for your friendship, understanding and loyal support that has made our growth possible. To you we are sincerely grateful.

Meadows
MANUFACTURING COMPANY
ATLANTA

QUALITY...BACKED BY A DESIRE TO PLEASE

EVERY **SEALMASTER** BEARING

Pre-Lubricated



1. PERMANENTLY SEALED

Felt-lined steel dinger, rotating in labyrinth, excludes dirt and retains proper amount of lubricant.

2. SELF-ALIGNING

Bearing unit, with seals independent of housing, can align itself in any direction without seal distortion.

3. PRE-LUBRICATED

Before shipment from the SealMaster factory, the bearing chamber is filled with proper amount of lubricant.

4. NO HOUSING WEAR

Patented locking pin and dimple prevent rotation of outer race in housing. This eliminates housing wear, permits shaft alignment and positions unit for relubrication.

5. FLOATING RETAINER

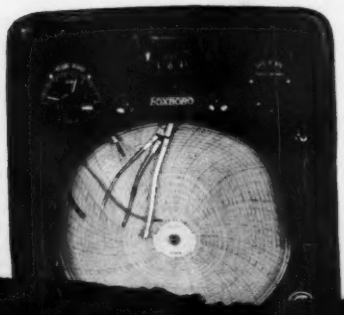
Ball retainer is designed to float on ground inner surface of outer race. Traps lubricant, prevents churning.

TOP NAMES

IN TEXTILES

NOW USE CYCLELOG

CONTROLLERS



Bachmann Uxbridge Worsted Corp.
(Uxbridge Worsted Co.)
Barre Wool Combing Co., Ltd.
Bishopville Finishing Company
(A Division of Reeves Bros., Inc.)
Bradford Dyeing Assn. (U.S.A.)
Chatham Manufacturing Co.
Clearwater Finishing Co.
(United Merchants and
Manufacturers, Inc.)
Crown Manufacturing Co.
Cyril Johnson Woolen Co.
Dan River Mills, Incorporated
Davenport Hosiery Mills, Inc.
Delta Finishing Co.
Dorlexa Dyeing & Finishing Co.
Erie Dyeing & Processing Co.
Excelsior Finishing Plant
(Deering Milliken)
F. C. Huyck & Sons
(Kenwood Blankets)
Fieldcrest Mills
Globe Dye Works
Goodall-Sanford, Inc.
Hans C. Bick Co., Inc.
Hayward-Schuster Woolen Mills, Inc.
[illegible] Inc.
[illegible]cessing Co.)

Marquette Roller Bearing Spindles

with Full-Floating Footstep Bearing....

FOR COTTON, RAYON,
NYLON, WOOL, WORSTED

power consumption has been reduced 12%.
You too can get *more yarn at lower cost* with Marquette Roller Bearing Spindles. We'll be glad to prove this by a test installation in *your* Contact our home office or one of our sentatives.

D PATENTS PENDING

MPS • FUEL OIL INJECTORS
ION PARTS AND ASSEMBLIES

ice post card.

'Round the World 1113 t

Calculations based on performance records of Victor 4/0 F1.1 X3D Travelers show that one dollar's worth ran about 27,840,000 miles — 1113 times the distance around the equator.

When you see performance like that, it's easy to think that traveler costs are too small to be worth bothering about. But such records are achieved only when you choose the right traveler for the job, and get the best that money can buy.

Selecting travelers carelessly, without proper regard for quality, will quickly cut do
age". Also, excessi
plus frequent tr
can boost your tr
in yarn product

When you
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VICTOR RING TR

PROVIDENCE, R. I. . . . . 20 M

GASTONIA, N. C. 358-

For more in

Favored Range Drive

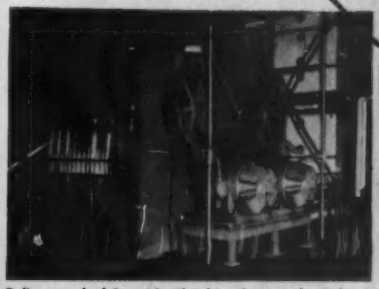
for...

PRINTING

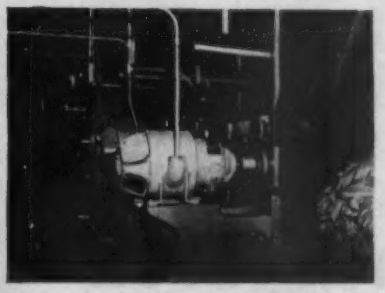
CLOTH FINISHING

BLEACHING

DYEING



Delivery end of Peroxide Bleaching Range. Photo shows, left to right, double light strand washer, steaping "J" box (peroxide). Driven by two Elliott Crocker-Wheeler, 25/30-hp, 400/1600-rpm, adjustable-speed motors.



Delivery end of Open Soaper Range, showing six Elliott Crocker-Wheeler 3/5-hp, 51/206-rpm gear output speed, constant-voltage, adjustable-speed motors in range and driving the open soaper nip rolls. Tension is controlled by five dancer roll rheostats.

Elliott Crocker-Wheeler four-bearing motor-generator set.

CROCKER-WHEELER
DC Motors

● Proven by wide use in textile applications, these motors are particularly favored for their dependability and special adaptability to the service required.

Maintenance is particularly easy. Any required enclosure is available. In the drip-proof motor shown above, the removal of two plates gives ready access to the commutator and brush assembly, through generously large openings. Special dye-house insulation provides immunity to moisture and caustic fumes.

Use Elliott Crocker-Wheeler years of experience on your range drive problems. Consult us.

ELLIOTT Company

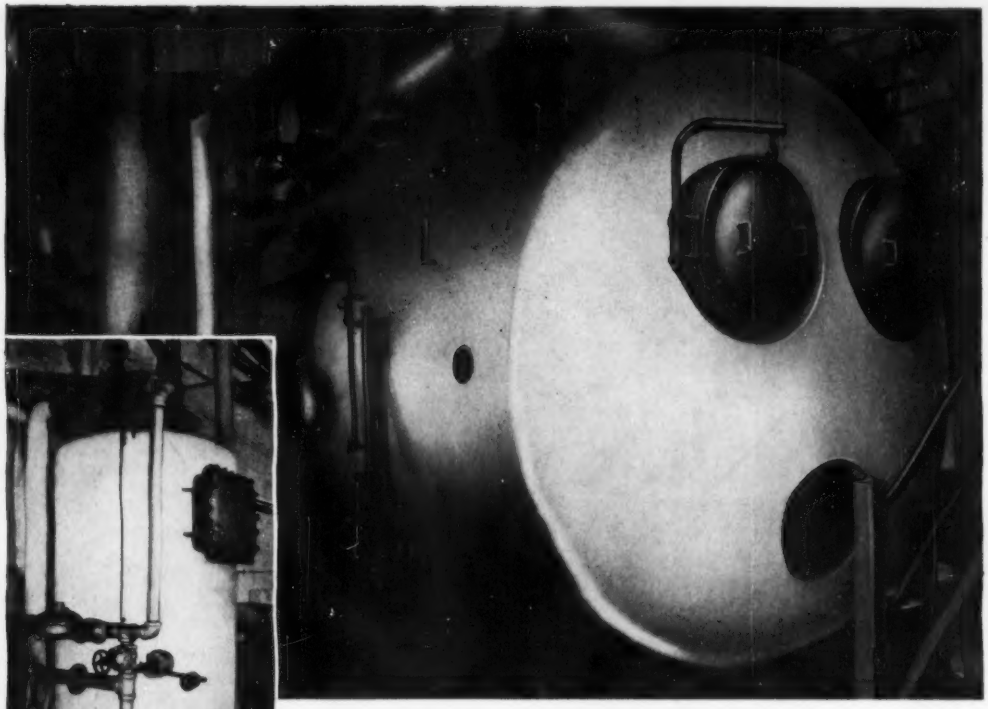
CROCKER-WHEELER DIVISION

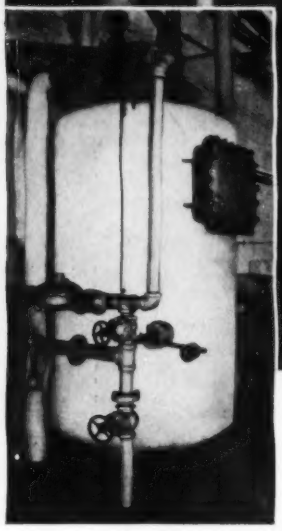
AMPERE, N. J.

BRANCH OFFICES AND REPRESENTATIVES IN PRINCIPAL CITIES

ELLIOTT *Approved* SERVICE SHOPS COVER THE COUNTRY

CW-41





A Big Help

on small—as well as big—deaeration jobs

Small deaerators are big business at Worthington! That's why the plant with small-capacity requirements will benefit by getting acquainted with the complete range of Worthington deaerating equipment.

Worthington Gives You All Types, All Sizes

Worthington deaerating heaters and deaerators are built in sizes to handle from a few thousand pounds an hour to over a million. They are tailor-made to fit the particular requirements of each job. Special designs are available for operation with scale-forming water.

Both tray and steam-jet types are made—with external surface-type vent condensers or internal direct-contact vent condensing. They can be furnished for any practical operating pressure—constant or variable—or for vacuum operation.

With a complete range of sizes and types at their fingertips, Worthington engineers can competently recommend the design best suited to *your* requirements.

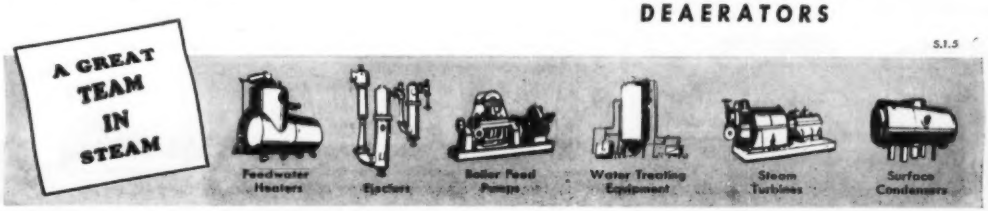
Remember, too, Worthington designs are backed by over 50 years experience in the design and manufacture of direct contact feedwater heaters and over 100 years experience in hydraulic machinery.

Send your water treating problem to Worthington Pump and Machinery Corporation, Steam Power Division, Harrison, N. J.

WORTHINGTON

DEAERATORS

S.1.5



MAKES FINISHES MORE DURABLE...

Crush Resistant, Stabilized, Glazed, Embossed

EVEN
AFTER
REPEATED
WASHINGS
RHONITE R-1
Stable to storage—no refrigeration needed.
Non-volatile—applied and controlled with ease on standard resin finishing machinery.
Completely soluble in cold water—simply add and stir.
Compatible with other commonly used finishes.
RHONITE R-1
—another outstanding textile chemical by the makers of LYKOPON.

Be wise and thrifty. Get full details of unique new RHONITE R-1 textile finish.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representations in principal foreign countries

RHONITE, LYKOPON are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.

Brand New

PATENT PENDING

Completely new method of manufacture, at new low price. Various styles.

CLEANDRAFT
Non-lubricating Top Rolls for Back and Middle Lines*

- eliminate all lubricating effort.
- give much cleaner yarn, due to complete freedom from lubricant.
- reduce picking and cleaning.
- simple to install.

Low First Cost — Substantial Savings — INVESTIGATE

*Not for front line use.

CLEANDRAFT Non-lubricating Top Rolls are made for back and middle lines of all standard and long draft cotton Spinning Systems.

For complete information, write

INDUSTRIAL PLASTICS, INC.

21 VERNON STREET, WHITMAN, MASS.

Northern Sales:
Richard K. Butler
P. O. Box 428
Whitman, Mass.

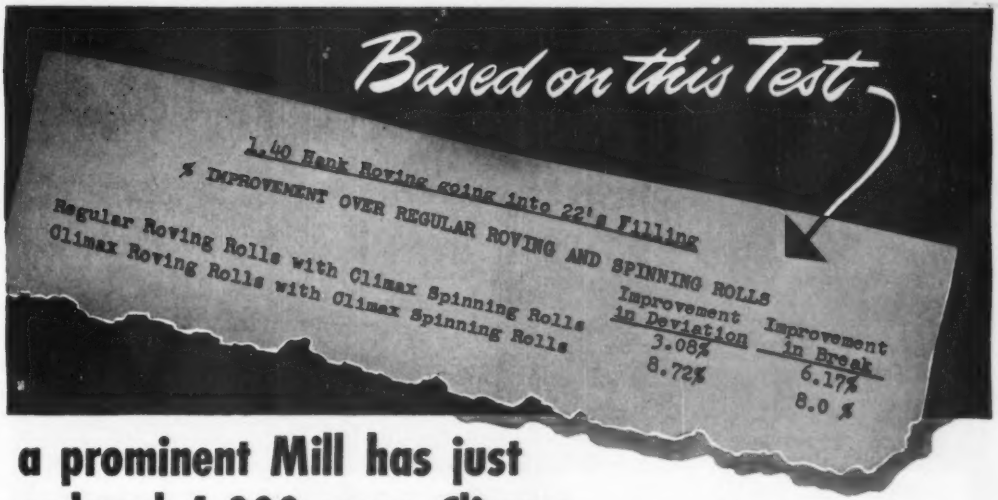
Southern Sales:
Watson and Desmond
P. O. Box 1954
Charlotte, N. C.

Southern Service Office:
Box 1863
Spartanburg, S. C.

Belgium:
Firma Paul Pflieger
158 Chaussee de Courtrai,
Ghent, Belgium

France:
Thoma & Compagnie
21 Rue de la Chapelle
Paris 18e, France

For European Services:
Victor Beecroft
54 Boroughgate
Otley, Yorkshire, England


Based on this Test
1.40 Hank Roving going into 22's Filling
% IMPROVEMENT OVER REGULAR ROVING AND SPINNING ROLLS
Regular Roving Rolls with Climax Spinning Rolls
Climax Roving Rolls with Climax Spinning Rolls
Improvement in Deviation
3.08%
8.72%
Improvement in Break
6.17%
8.0 %

a prominent Mill has just ordered 4,000 more Climax Rolls, both roving and spinning

CLIMAX
BALL BEARING TOP ROLLS

FOR ROVING
FOR SPINNING

They pay a quick, handsome profit through

BETTER YARN AT LESS COST

Climax Ball Bearing Top Rolls adopted by

Whitin

MACHINE WORKS

and supplied on Whitin machinery as standard where anti-friction rolls are required. Climax Rolls are available through Whitin Machine Works and all of their agents.

MACHINECRAFT, INC.

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Charlotte, N. C.

Brazil:
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Caixa Postal 2904
Sao Paulo, Brazil

Mexico:
Stobnicky, S.A.
Avenida, Uruguay 58
Mexico, D. F.

For European Service:
Victor Beecroft
Loathley, Otley, Yorkshire, England

***Only* CLIMAX**

among anti-friction rolls, permits INTEGRAL RECOVERING and INTEGRAL BUFFING—WITHOUT DISASSEMBLING.

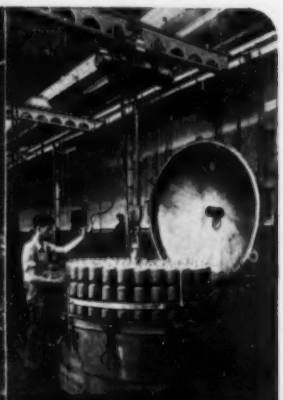
Climax Ball Bearing Top Rolls are made for

- Cotton System Spinning Rolls for all standard and long-draft systems
- Cotton System Roving Rolls
- American System Worsted Rolls
- French and Bradford Worsted Rolls
- Wool Spinning Rolls

Climax Rolls are custom-made to suit your equipment and your weighting requirements.

TO CUT OVERHEAD GO OVERHEAD with CLEVELAND TRAMRAIL

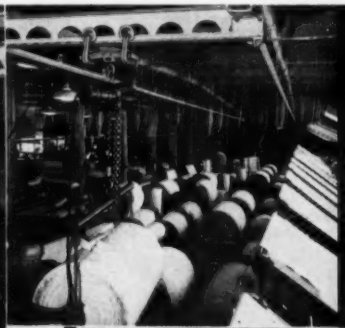
BALE HANDLING—Pile them higher, easier. Store more. Save aisle space.



PACKAGE DYEING—Heavier loads with more packages quickly handled by one man.

Are you enjoying the many benefits that Cleveland Tramrail material handling equipment can provide? Hundreds of textile mills, large and small, are. We know of no other equipment that pays for itself so quickly. Why not get the facts? A Cleveland Tramrail representative will be glad to discuss textile handling with you, without obligation, of course.

BEAM HANDLING—Handle larger beams, faster. No floor interference. Space looms closer.



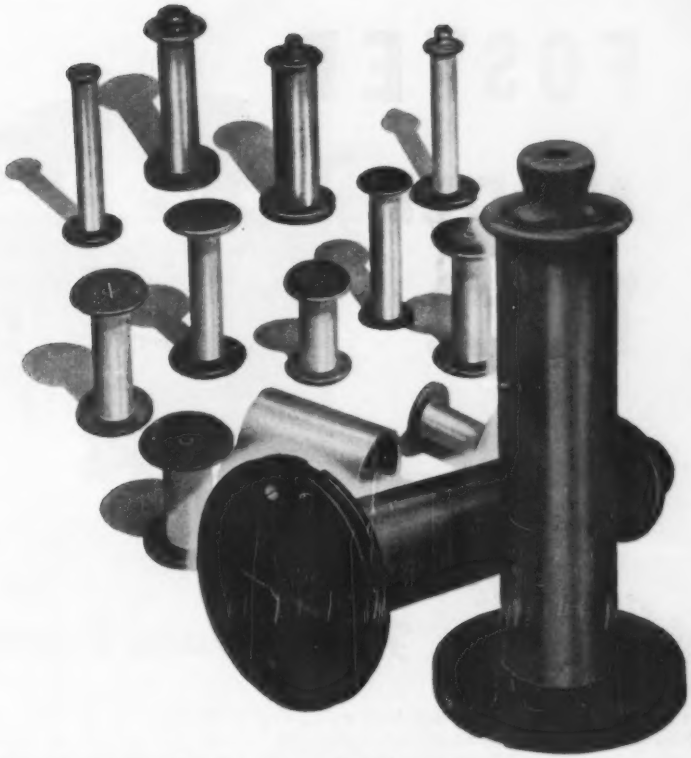
CLOTH HANDLING
Use floor area for production, not aisleways. Cut cloth handling time.

AUTOMATIC DISPATCH
Deliver materials between floors or buildings automatically. Cut costs.

GET THIS BOOK!
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
8474 EAST 287TH ST. WICKLIFFE, OHIO

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT



Want a real "buy" in synthetic yarn bobbins?

If you are looking only for a bargain price this advertisement won't interest you at all.

But if you want an honest return for the money you invest in synthetic yarn bobbins, we may have the answer.

Featured in the illustration above is a down-twister bobbin. The surrounding bobbins and pirns are for a variety of other purposes. All of them have one thing in common—all are made from Synthane laminated plastics.

Synthane is non-metallic, light in weight, hard, dense, almost indestructible—even with rough handling. Synthane is moisture resistant and dimensionally stable, too. More important to you, it has a super-smooth surface that is extra-gentle to your valuable yarns.

We make these bobbins and pirns to hair's breadth accuracy by precision methods. Then each bobbin is checked carefully for dynamic balance, resulting in lower spindle maintenance and reduced power waste.

These are the reasons why textile men willingly pay more for Synthane bobbins and pirns.

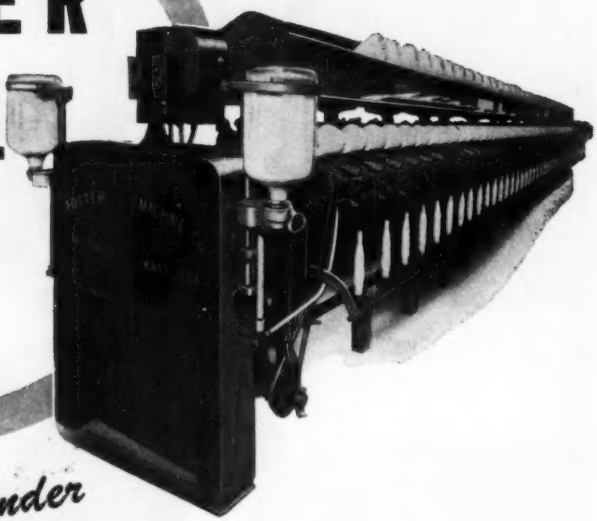
Incidentally, there are many more Synthane products for textile applications—from non-snagging hosiery examining forms to corrosion-resisting pipe for nylon sizing machines. We have a folder picturing and telling about these other Synthane textile uses. Send for it. Textile Division, Synthane Corporation, 50 River Road, Oaks, Pennsylvania.

PLASTICS WHERE PLASTICS BELONG

SYNTHANE

Manufacturers of laminated plastics and parts for the textile industry

FOSTER MODEL 102



The Versatile Winder For Wool and Worsted

The Foster Model 102 winds soft twist and hard twist yarns of any count or type, on warping cones, knitting cones, parallel tubes, dye packages or twister packages. It can be built to wind 6" traverse or 7" traverse, any taper and any angle of wind from 9° to 18°. This is the versatility of Foster 102.

Low maintenance is another feature of Model 102. All machine parts contacting the yarn, including traverse guides, are made of hardened metals or porcelain, specially selected for the purpose. Sturdy construction, with reduced vibration and wear, means longer service without repair. Repair costs run as low as $3.50 per year per 100 spindle machine.

Other advantages of the Foster Model 102 may be summed up as increased production features. The 102 can be built to take a 7" traverse cone if desired, reducing doffing and handling. It is equipped with one of several Foster self-threading tension and slub-catching devices, and operates at high speeds winding soft twist yarns (one mill we know is running 70s worsted yarn at 400 y.p.m.). The supply bobbin is always in exact alignment with the tension bracket, near enough to get a single balloon, thus reducing strain on the yarn. The empty bobbin conveyer below the bobbin pins empties directly into a standard sized truck, — eliminates lifting and rehandling.

Put it all together and it spells better winding of wool and worsted at less cost, with the Foster Model 102.

FOSTER MACHINE CO.
WESTFIELD, MASS.

Sustained speeds with fewest stops . . . that's what wins on the Speedway...and in the modern weaveroom, where competition always begins *(and all too often ends)*.

In both cases, *dependable* replacement parts ...*readily available*...are often the deciding factor.

And C&K Loom Parts are always dependable, readily available, uniform in quality.

So keep your weaveroom "on the track" and "in the running." When you order replacement parts, order *factory-duplicate* C&K parts that will continue to make it good business to say: "This Fabric is Woven in the U. S. A. . . . on Call-Box Looms built by C&K."

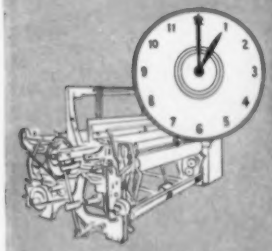
CROMPTON & KNOWLES LOOM WORKS, WORCESTER 1, MASS., U. S. A.
Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

Keep Your Looms Running Right

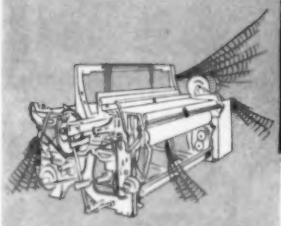
...with C&K LOOM PARTS

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

You BUY by the pound . . .

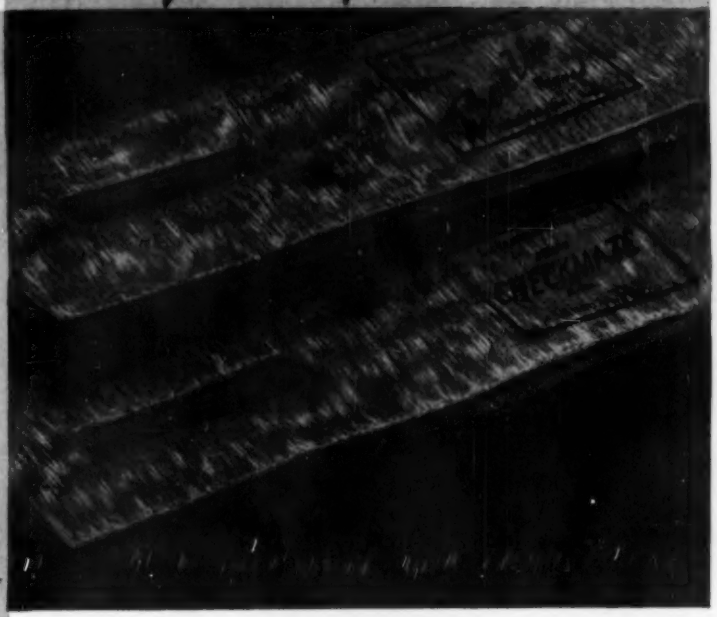


BY ACTUAL TESTS...
Hundreds of extra loom hours.



BY ACTUAL TESTS...
Decreased down time.

BY ACTUAL TESTS...
Far less wear on other loom parts.



but they COST you by the hour!

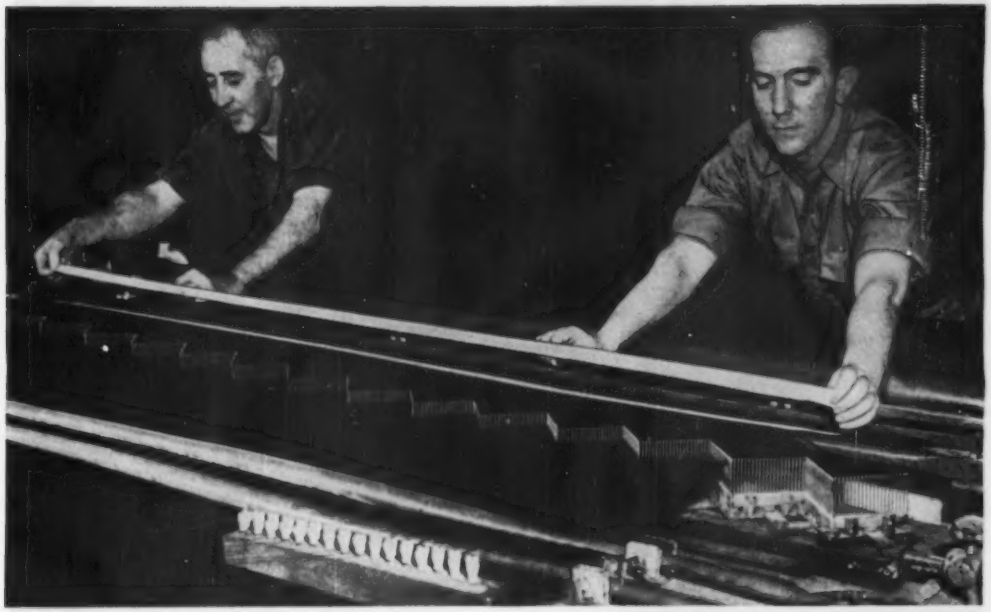
You can't kid Father Time! Check straps are *priced* by the pound . . . but they *cost* by the hour.

Carefully selected, thoroughly tested CHECKMATE and BON VIE check straps literally run thousands of loom hours longer; drastically reduce down time and afford greater protection to expensive loom parts. They're doing it NOW in major mills throughout the nation—they *could* be saving money for you. Write today for details—and *prices*—then check your *actual* cost!

SOUTHERN Belting COMPANY

236 FORSYTH STREET, S. W. ATLANTA 2, GEORGIA

THE "SOUTHERN WAY" IS THE MODERN WAY



TAPE TAKES OVER

... and speeds efficient beam transfer at Bachmann-Uxbridge Worsted Company

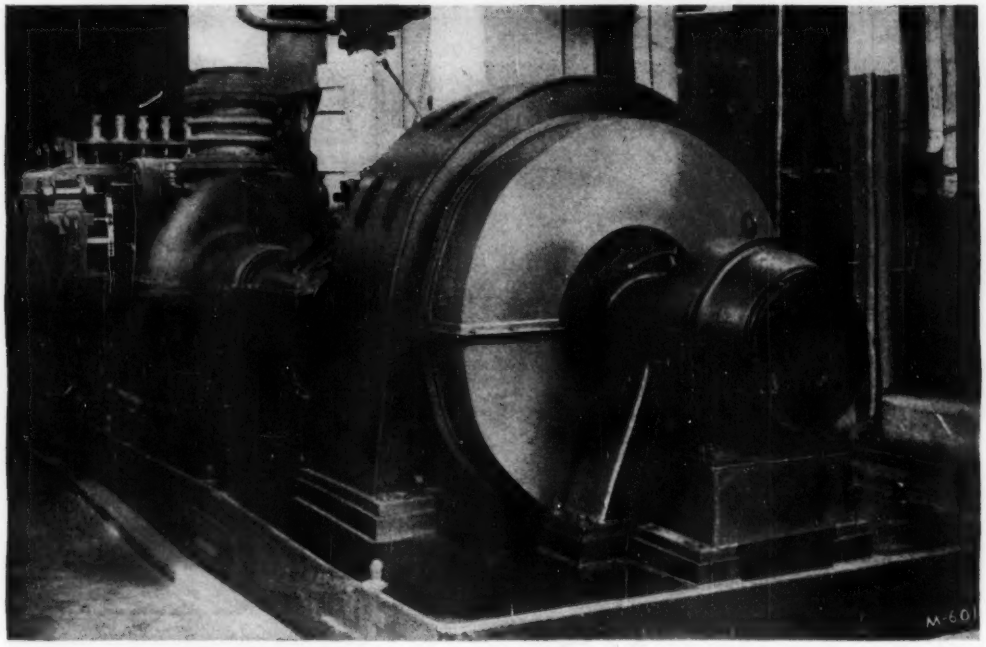
Tape is the easy way to hold warp ends in alignment during transfer of loaded beams! Bachmann-Uxbridge Worsted Co., Uxbridge, Mass., does the job faster with "SCOTCH" Textile Tape No. 254. Entire tying-in operation is simplified—with fewer crossed warp ends—by sandwiching threads between two strips of this handy, stick-at-a-touch tape.

Dozens of "SCOTCH" Textile Tapes are cutting costs on dozens of other textile operations at many of the nation's largest mills. And these tapes can "take over" for you! For more information, write for booklet.

HERE'S HOW BOLTS ARE BALED quickly, easily with a few strips of "SCOTCH" Brand Filament Tape No. 880. Rayon filament construction makes this tape strong enough for almost all heavy-duty packaging—absorbs shocks and jolts, too. Tape can't cut into fabric like ordinary strapping.

FREE BOOK! Twenty-six pages packed with facts and photographs show you how and where many mills have streamlined production with "SCOTCH" Textile Tapes. For your copy, write: Minnesota Mining & Mfg. Co., Dept. TW-121, St. Paul 6, Minnesota.

The term "SCOTCH" and the plaid design are registered trade marks for the more than 100 pressure-sensitive adhesive tapes made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "SCOTCH" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: Minn. Mining & Mfg. Co., International Division, 270 Park Avenue, New York 17, N. Y. In Canada: Minnesota Mining & Mfg. of Canada, Ltd., London, Canada.



POWER... Plus Process Steam—at three pressures

The turbine generator is the ideal power-generating unit for the textile mill.

It furnishes power economically. It permits bleeding off steam for various processes in the mill . . . at any desired pressures.

The Security Mills, Inc., Newtonville, Mass., manufacturers of high-grade woolen knit goods, uses steam for dyeing and finishing, for building heating, feed-water heating, and for hot water to be used in processing.

Since 1947 it has used an 800-kw Worthington geared turbine generator.

Operating on inlet steam at 400 psig and exhausting to 2 psig, it automatically extracts 12,000 lb/hr of steam at 25 psig. An uncontrolled bleeder opening in the turbine casing also permits extraction up to 6000 lb/hr at 75 psig.

A back pressure governor regulates the output of the generator to maintain constant pressures when the unit is paralleled with other power sources.

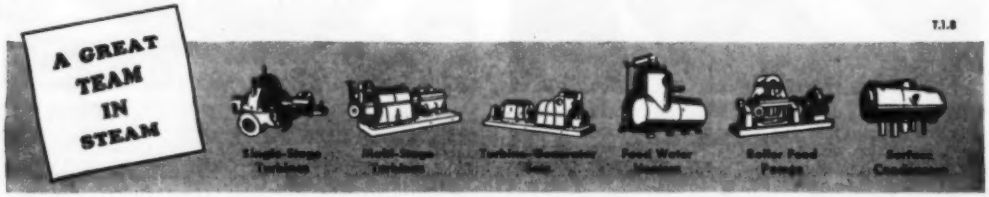
Selection of this turbine generator has resulted in a plant heat balance that insures maximum steam economy. Worthington manufactures all three—turbine, gear and generator. Worthington turbine generators are built in sizes up to 10,000 kw.

Get the story of this economical, always dependable power from your nearest Worthington representative, or write to WORTHINGTON PUMP AND MACHINERY CORPORATION, Steam Turbine Division, Wellsville, New York.

WORTHINGTON

STEAM TURBINE GENERATORS

T.1.8



"Tycol Alweave cuts spindle drag... reduces thread breakage... jumps production"

Right! The stability and lubricating value of Tycol Alweave Spindle Oils assure minimum wear and low power consumption, all helping to step up production by reducing drag and thread breakage.

A wide range of Tycol Alweave Textile Oils is specially designed in both mineral and compounded grades to cut costs in other processes in your mill.

For further information about Tycol Alweave Textile Oils, write, wire or phone your nearest Tide Water Associated office today.

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INDUSTRIAL LUBRICANTS

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TIDE WATER ASSOCIATED OIL COMPANY

17 BATTERY PLACE · NEW YORK 4, N. Y.

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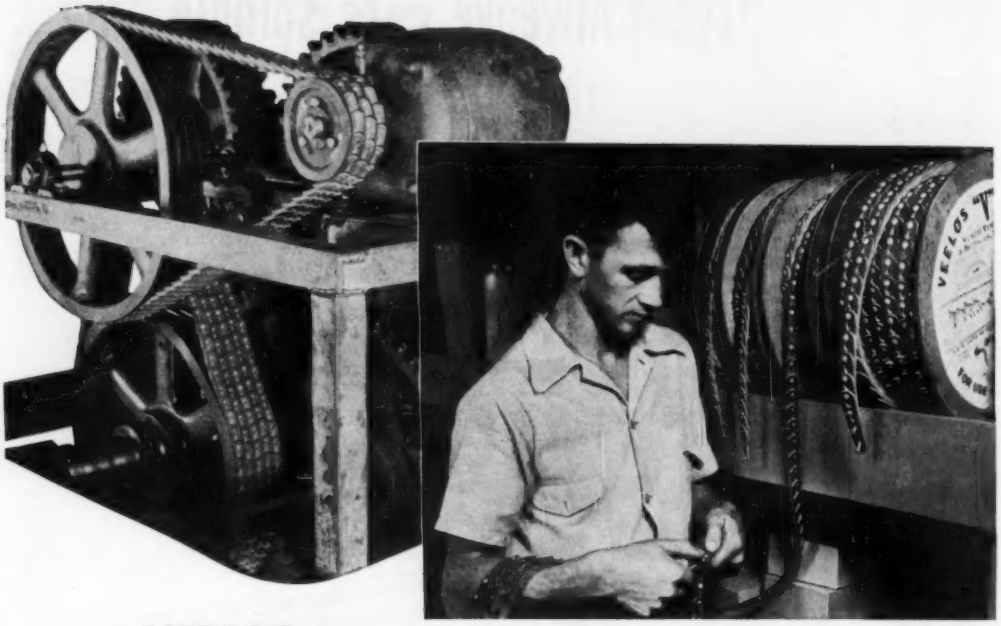


WITH **VEELOS** THE ADJUSTABLE V-BELT

You Always have the Right Size Belt When You Need It!

When endless v-belts fail and your stockroom does not have the size you need . . . that means loss of time and production. But if you're wise and have Veelos, the adjustable v-belt, in stock, this can't happen to you.

With Veelos, *any size* v-belt can be made up right from a single reel. Just four reels of Veelos in the O, A, B and C widths can replace up to *316* sizes of endless v-belts on any drive in your plant. If your machines call for only one or two widths, you stock only those reels of Veelos and *you always have the right size belt when you need it.*

Veelos has other advantages, too. Replacement time is less (never necessary to remove outboard bearings). Matched sets that stay matched can be made up instantly. You get full, vibrationless, power delivery because belt tension can be held uniform.

***For full production, always*— standardize on Veelos, the adjustable v-belt. Write for your copy of the VEELOS DATA BOOK today.**

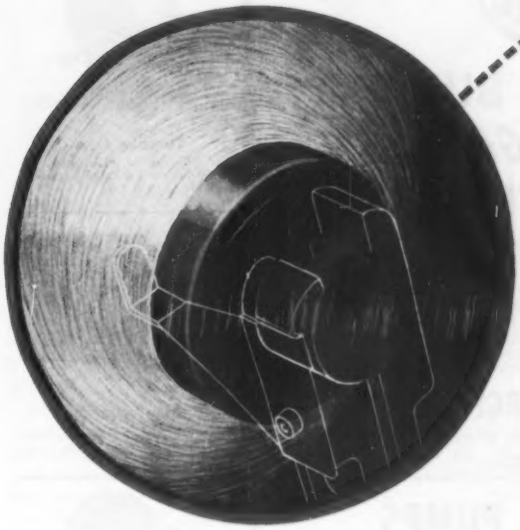
VEELOS
THE LINK
V-BELT

ADJUSTABLE TO ANY LENGTH • ADAPTABLE TO ANY DRIVE

Made in all widths in three types: regular, oil-proof, static conducting. Also double V in A and B. Packaged on reels in 100-foot lengths. Sales engineers in principal cities; over 350 distributors throughout the country. VEELOS is known as VEELINK outside the United States.

MANHEIM MANUFACTURING & BELTING COMPANY • MANHEIM, PA.

Nylon plastic bearings need no oiling



Nylon bearings molded by Franklin Plastics Div., Robinson Industries, Inc., Franklin, Penna.

... prevent yarn contamination ... cut maintenance costs

Before standardizing on Du Pont nylon plastic, U. S. Textile Machine Co. used three other materials for the take-up roll bearings of their U. S. Acme Face Drive Twister. Each of the three had the same bugaboo: if they were oiled, the oil splattered on the yarn. If they weren't, the bearings wore and threw abraded particles into the yarn.

Then nylon plastic was tried. In field tests it showed no sign of wear after the equivalent of two years' running. And not a drop of lubricant was used. Nylon's unique bearing characteristics made it unnecessary.

In a year's time this nylon bearing means quite a saving to the throwster. In addition to the all-important prevention of contamination to yarn, it eliminates the time-consuming job of oiling bearings. There's less cleaning to do, fewer bearing replacements and, naturally, less machine down-time.

This combination of performance and economy is typical of the job that molded Du Pont nylon does on a lot of standard mill equipment. For example: flyer blocks, bolsters, cap bars, and thread guides.

Perhaps nylon's unique bearing characteristics, strength, resiliency and other valuable properties can help solve a problem for you. For further information on nylon and other Du Pont plastics, write:

E. I. du Pont de Nemours & Company (Inc.)
Polychemicals Department, District Offices:
350 Fifth Avenue, New York 1, New York
7 S. Dearborn St., Chicago 3, Illinois
845 E. 60 St., Los Angeles 1, California

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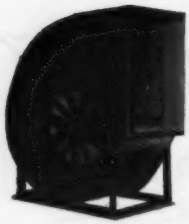
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY
Polychemicals
DEPARTMENT
PLASTICS • CHEMICALS

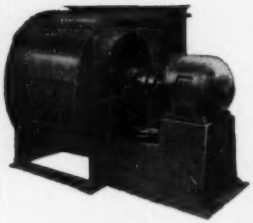


LIMIT-LOAD FANS

For large-scale ventilation. Quiet, non-overloading. Sizes up to 500,000 c.f.m. Bulletin 3675.

AXIAL FLOW FANS

For light-duty ventilation and air conditioning service. Compact, non-overloading. Bulletin 3533-C.



POWER PLANT FANS

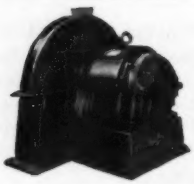
Primary, forced draft, induced draft — built for the severest service. Bulletin 3750.

BREEZO FANS

Easy-to-install wall fans. Durable and very economical. 6 sizes. Bulletin 3222-F.

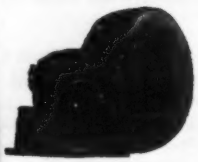
TYPE "CB" PRESSURE BLOWERS

For single-stage pressure blowing up to 2¼ pounds per square inch. Bulletin 3553-A.



TYPE "CC" PRESSURE BLOWERS

In sizes for pressures up to 4 pounds and capacities up to 75,000 c.f.m. Bulletin 3553-A.



BABY CONOIDAL FANS

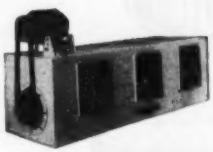
Compact, for portable or duct-connected service. Quiet, efficient. Bulletin 3499.

INDUSTRIAL EXHAUSTERS

With interchangeable wheels for air exhausting or materials conveying. All-welded. Bulletin 3576.

"E" BLOWERS—EXHAUSTERS

For oil or gas furnace blowing, line boosting, cleaning. Bulletin 3014-C.



SHORTBOY VENTILATING SETS

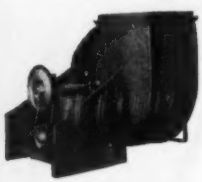
New high efficiency all-aluminum blowers with hollow shaft. Bulletin 3701.

BELT-AIR FANS

Efficient, quiet wall fans for free-air delivery up to 19,000 c.f.m. Bulletin 3222-F.

VOLUME FANS

For blowing or exhausting, up to 10" s.p. 8 discharge positions. Bulletin 3615-A.



BELTED VENT SETS

Compact, "package" fans for duct or free-air delivery. Non-overloading. Bulletin 3720.

"RE" BLOWERS—EXHAUSTERS

Larger versions of "Buffalo" "E" Blowers, in sizes from 50 to 1600 c.f.m., for pressures up to 40" of water.

"Buffalo" BUILDS THE *RIGHT* FAN FOR THE JOB

Whether you need to ventilate a small room or an entire factory — clean tools with air or give your boiler system the most efficient mechanical draft — "Buffalo" builds the fan for the job! And whatever "Buffalo" fan you pick, you can know that its performance is backed by 73 years of "air know-how". Take a look at the fans shown here, and write us for engineering bulletins by number on any that might fit your particular application!

BUFFALO FORGE COMPANY

184 MORTIMER STREET, BUFFALO, NEW YORK

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

Sales Representatives in all Principal Cities

—And For PUMPS . . .

. . . you'll find a rugged precision-built "Buffalo" Centrifugal Pump of the right design, the right metal or alloy and right capacity to handle your liquid-moving job most efficiently. WRITE FOR FACTS!

BUFFALO PUMPS, INC.

184 MORTIMER STREET, BUFFALO, NEW YORK

Canada Pumps, Inc., Kitchener, Ont.

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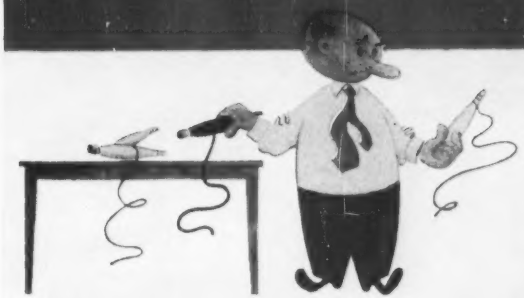
REEVES

—alone—gives you the choice of 3*



REEVES—with the widest application experience of *any* manufacturer in the specialized field of speed control engineering—knows as well as you do that no *one* type of drive can be the most efficient solution to *every* speed control problem encountered by machine operators and builders.

That's why REEVES builds a *complete* line . . . *three* separate and distinct types of drives . . . all incorporating the same time-tested REEVES operating principle, but each possessing *different* features of design and construction to meet the individual requirements of the individual machinery builder and user.

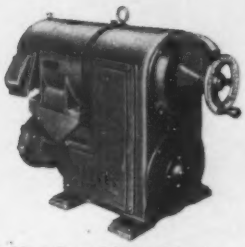
All three REEVES units are available in the widest range of designs, sizes, speed ratios and automatic controls, assuring the *right* unit for every machine . . . the *right* speed for every operation and every operator, under every changing condition.

A REEVES field engineer, thoroughly familiar with your processes, will be glad to meet with you and discuss your particular speed control problem—without obligation. You can be sure his recommendations will be completely unbiased and impartial as to the unit best suited to your needs because REEVES is the *complete* line! Write for the name of your nearest representative and for your *free* copy of the latest REEVES catalog, No. W56-1a-G.

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

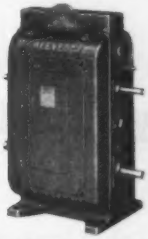
Recognized Leader in the Specialized Field of Variable Speed Control

accurate • variable **REEVES** *Speed Control*



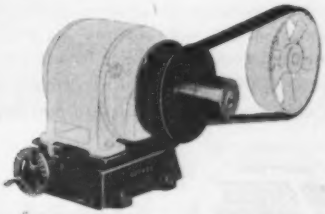
*** Vari-Speed Motodrive®**

A complete variable speed power plant. Combines any standard, constant-speed motor, REEVES speed-changing mechanism and gear reducer in one, compact unit. Sizes to 25 hp; speed ratios as great as 10 to 1.



*** Variable Speed Transmission**

Provides stepless speed adjustability over a wide range—as high as 16 to 1; sizes to 87 hp. Vertical or horizontal designs—open or enclosed.



*** Vari-Speed Motor Pulley**

Converts any standard, constant-speed motor to a variable speed drive. Speed variations up to 4 to 1. Sizes to 10 hp.

These pictures of a plant's storage yard show how easy it is to overlook valuable scrap.

You lose when scrap plays Hide-and-Seek

It doesn't look as though much scrap is in this plant's storage yard, does it? But let's look closer, beneath the weeds. Tons of iron and steel scrap are hidden here.

Could this be true of *your* storage yard?

If so, there are two good reasons why you should gather up this worn-out iron and steel equipment and call your scrap dealer *immediately*. Most important, steel mills are in desperate need of scrap. Unless much more scrap is turned in there is danger that steel production may be cut in the months to come. And our nation's defense program may suffer through the steel shortage.

The high price of scrap is another good reason. You get more actual cash by selling now.

Take these two simple steps: Survey your plant and storage yards for worn-out iron and steel parts and equipment; then call your local scrap dealer. But don't stop here. Make plans now to establish a regular scrap collection program in your plant.

ARMCO STEEL CORPORATION

4731 CURTIS STREET, MIDDLETOWN, OHIO • PLANTS AND SALES OFFICES FROM COAST TO COAST • EXPORT: THE ARMCO INTERNATIONAL CORPORATION

ARMCO

It's the EXPERIENCE that counts...

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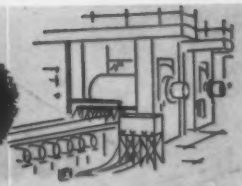

STEEL INDUSTRY

RUBBER INDUSTRY

PLASTICS INDUSTRY

Reliance V★S is the result of nearly 50 years' experience in the engineering and application of Adjustable-speed Drives

V★S Drive provides an unlimited range of speeds from A-c. circuits. In addition, V★S offers controlled acceleration and deceleration; slow speed for jogging, inching or creeping; fast, smooth reversal at any point desired and other specialized functions to suit particular applications. Safe, simplified control saves man hours—reduces operator fatigue. Centralized operator's station for the control of one or more drive motors can be located at any convenient point. Write today for *new* V★S Drive Bulletin D-2311.

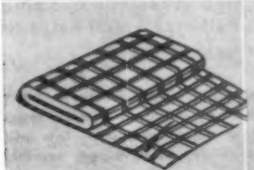
FOOD INDUSTRY

PAPER INDUSTRY

WIRE AND CABLE INDUSTRY

MINING INDUSTRY

CHEMICAL INDUSTRY


TEXTILE INDUSTRY

METAL FABRICATING INDUSTRY

PROOF of PROGRESS!

Just after the turn of the century, the lathe above made news with its adjustable-speed Reliance Armature-shifting Motor. Modern lathes (right) have built-in Reliance V★S Drives to provide control of all functions of spindle and speeds.

RELIANCE ELECTRIC AND ENGINEERING CO.

1086 Ivanhoe Road, Cleveland 10, Ohio — Sales Representatives in Principal Cities

today piping repairs cost more!

Crane No. 465½
Iron Body Gate Valve

You make fewer of them by using Dependable Quality

CRANE VALVES

. . . That's why more Crane Valves are used than any other make

No bonnet joint trouble with this valve

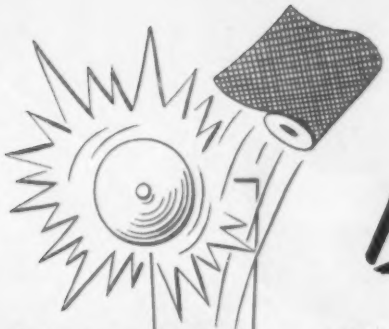
A typical example of low-cost maintenance—Crane No. 465½ 125-Pound Iron Body Gates. Rarely does the bonnet joint need attention. Flange construction includes reinforcement to prevent distortion and utilizes more bolts, more closely spaced, than is usual in valves of this class. Crane precision-guided seating reduces seat and disc wear. Packing has long life because these valves have a deep stuffing box filled with high grade asbestos ring packing. A ball-type gland helps to equalize the packing load.

Better performance features like these make Crane the better buy in valves of every type. They assure low maintenance cost—low ultimate valve cost—for every piping service.

CRANE CO.

General Offices:
836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING



NOW IN '51!

85,000,000 YARDS PER WEEK

bleached in Du Pont Continuous Peroxide Systems

75 million yds./wk. 1950

50 million yds./wk. 1949

36 million yds./wk. 1948

20 million yds./wk. 1947

8 million yds./wk. 1945

500 thousand yds./wk. 1939

Production figures of Du Pont Continuous Peroxide Systems reflect industry's acceptance of the process. A glance at the yardage figures shows the steady growth since 1939, when Du Pont's first units were put into commercial operation. Today, Du Pont Continuous Bleaching Systems are producing 85 million yards per week . . . and have sufficient capacity to bleach over 65% of the annual cotton piece goods production in the United States!

For Increased Production and Profits!

If you are now operating a peroxide bleaching process of any type, you will be interested in getting the details on the Du Pont "Bleaching Process Analysis" Service—a free service designed to keep your bleachery operating at peak efficiency at all times. For additional information, address your requests to E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington 98, Del.

Substantial advantages over older methods brought on this upswing. The Du Pont System gives top-quality bleaching with high speed. It's most economical. Because it's continuous, the process permits a steady production rate . . . assures uniform results. Today, systems of all types are available to meet space and capacity requirements of any size mill. That's why more and more mills are finding Continuous Bleaching the modern answer to bleaching needs.

Why not see for yourself how Continuous Bleaching can benefit your mill? Send in the coupon below for our illustrated booklet which describes typical installations and explains all phases of the process. Du Pont technical men will be glad to survey your plant requirements and help you select the proper equipment. For further information, write to E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington 98, Del.

DU PONT
CONTINUOUS PEROXIDE BLEACHING

DU PONT

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

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He's a great violinist—

Albert Spalding is recognized as the greatest violinist that America has produced. In 1920 he was soloist with the New York Symphony Society in that orchestra's first European tour. He has played with leading orchestras of both continents.

BUT how does he compare with Spalding? . . . In everything we do, we make comparisons . . . In Full-Fashioned Knitting, the one standard for comparison is the 30-section "Reading" Machine with a production of 14 to 16 dozen pairs of superior quality stockings in 8 hours. 51-gauge, 60-gauge.

TEXTILE MACHINE WORKS • READING, PENNA.

Our Defense Program Faces a Crisis

A major crisis will soon confront our defense program.

It is not a crisis in raw materials. To find enough materials, from steel to cobalt, for defense production is a serious problem. But it is one that is being solved.

It is not a crisis in manpower. Shortages of workers with special skills hamper production, but these shortages are being relieved, slowly.

It is not a crisis in manufacturing capacity. American industry's record-breaking expansion is, with very few exceptions, keeping abreast of defense needs.

The coming crisis will be one of finance. It will rise from our failure to provide the means to PAY FOR the defense program we now have under way.

A $15 Billion Deficit?

Congress has approved a defense program which is scheduled to raise *total* federal spending in the year from June, 1952, to June, 1953, to somewhere between $85 and $90 billion. Additional appropriations for more air power and atomic development, which are now proposed, would add several billion dollars.

But Congress has not approved a tax plan to match such spending. With the new levies enacted in this session, tax collections during the 1952-53 fiscal year are estimated to fall somewhere between $70 and $75 billion. That would be roughly $15 billion short of balancing the budget. If the defense program is expanded, the deficit will be that much greater.

We have not yet felt the impact of the crisis that would accompany a federal deficit of this magnitude. Federal tax collections currently are big enough to balance federal expenditures. But the defense program is scheduled to boost the annual rate of federal expenditures $25 billion in the next year.

To Meet the Crisis

By January the crisis will be clearly in sight.

Then the President will present his budget. After that, Congress must act to close the broad gap between government income and government spending. If it fails to do that, the whole defense program will be menaced by weakness in its financial foundations. That weakness might well take the form of another destructive wave of inflation.

We have three ways to meet this crisis.

The best approach, of course, is to cut unessential expenditures. That can make a real dent in the deficit. The second is to collect more

taxes. The third, and by all odds the most dangerous, is to have the federal government meet its deficit by going deeper into debt. Borrowing, which might feed inflation, can easily lead to disaster.

Near Income Tax Limits

It will not be possible to raise taxes to meet the deficit merely by increasing further the rates on corporations and on persons in the upper income brackets. Congress has about scraped the bottom of that barrel.

The Senate Finance Committee said as much in reporting this year's tax bill. The Committee reported that it had "serious doubts as to the feasibility of raising any substantial additional amounts of revenue from income tax sources." The Committee observed that recent tax legislation brings the burdens of most corporate and individual income taxpayers close to the World War II peaks, and actually carries the rates paid by many taxpayers above those peaks.

Our ramshackle federal tax system must be thoroughly overhauled in order to broaden the tax base if it is to produce more revenue—without doing much more harm than good.

The shocking fact is that no one seems ready to act along any line that might enable us to surmount the crisis.

That fact of itself aggravates the coming crisis. And next year's presidential election doesn't make it any easier to move effectively. Both parties will shrink even more than normally from backing any program that might irritate any considerable number of voters.

If we are to meet this crisis on the tax front in an orderly way, the technical work should be in progress right now. To a large extent it is being ignored.

If we are to enforce the vitally essential program of government economy, there is the same urgent need to get under way the spade work that is required.

And if—as a last miserable expedient—we decide to let the federal government drift deeper into debt, it must have a well-developed program of borrowing from individuals and other investors, such as insurance companies, rather than from the commercial banks. Borrowing from commercial banks might speedily translate the deficit into more and more price inflation. No adequate program of borrowing from savings is now in sight.

Now Is the Time

It is possible, of course, that international relations may improve sufficiently to make it safe for us to slow down the rearmament program. If that should happen, the fiscal crisis would not be so critical. But that kind of good fortune has been notably absent in recent years.

Lenin, patron saint of Communism, is quoted to the effect that to destroy a political and social system such as ours "you must debauch its money."

We shall set democracy to digging its own grave if, through our preoccupation with politics during the presidential campaign, we pave the way for further debauchery of our money.

If we really want to avert that disaster, now is the time for us to get going.

Once the crisis is full upon us, it will be too late.

McGraw-Hill Publishing Company, Inc.

NPA Sizes Up Textile-Chemical-Supply Prospects

▶ Here's a summary of the present and future situation on chemicals used in the textile industry or basic to manufacture of those used in the industry—straight from a National Production Authority Chemicals Div. press conference.

AT A RECENT WASHINGTON press conference, NPA Chemical Div. officials set forth the present and future prospects for production and supply of chemicals important to the textile industry. Given below, by chemicals specifically used in textile processing or by basic materials for textile chemicals, is the situation as these officials saw it.

Sodium nitrate

No problems anticipated.

Sodium hydrosulfite

NPA—The problem here is the sulfur. The producing capacity is in, but if we don't have enough sulfur, producers and users may not be able to get all they want.

Beta-naphthol

NPA—The competition for naphthol comes from other chemicals. We are trying to increase naphtholene production, but it looks as if we may have a rough year next year, especially if the textile industry picks up.

Melamine resins

NPA—Melamine resins will be in more plentiful supply after the first quarter of 1952. Capacity is being increased, but there are no new producers.

Anthraquinone

NPA—The situation depends on benzene and phthalic anhydride. (See below).

Dyes and finishes in general

NPA—These covers a wide range of materials. In some cases we have heavy military requirements. Examples are mildewproofing agents and other textile-treating compounds. Generally, other than these compounds, the situation will be eased, including anthraquinone vats.

Ammonia

NPA—By the end of 1953, we will have enough capacity to produce 2,257,000 tons of nitrogen, and even this won't be enough if the food- and fiber-production program is to be continued. In 1953 still more capacity will have to be added.

Our current program on ammonia is rougaly this: At the present time we have installed capacity for 1,624,000 tons of synthetic nitrogen as ammonia. We are increasing that capacity by 590,000 tons through certificates of necessity. The industry is building about 53,000 tons more capacity without any inducement at all. This ammonia is being produced more or less around the country, dictated at the moment principally by the supply of natural gas. There are a few plants using coke, but there will be very little coke used for that purpose.

Of course, in addition to ammonia, we have about 200,000 tons a year of nitrogen that is taken from manufactured gas in the form of ammonium sulfate. Then we probably import another 500,000 tons of Chilean nitrate, which is another 500,000 tons of nitrogen.

The nitrogen program is being provided for amply. There will always be area shortages, depending on weather conditions and so forth, but they should be cleared up quickly, and I don't see any need for the government stepping into this picture from any control angle.

Chlorine

NPA—We now have operating about 6,500 tons a day of chlorine capacity. We have plants in various stages of completion that should raise the total by the end of 1953 to approximately 10,000 tons a day. Some of these programs have been delayed recently by projects of greater importance. So chlorine will be a little tighter than we expected it would be at this time. But over-all it isn't really short. If there were none consumed for probably a week, we would catch up.

Caustic soda

NPA—As we increase the production of chlorine, we increase the production of caustic soda. Most of the plants producing chlorine produce caustic as a co-product. Some produce sodium, some sodium nitrate, some others produce potash. But with the 10,000 tons a day of chlorine we will probably have about 10,000 tons a day of electrolytic caustic soda.

That seems to be all that we will need by 1953—in fact a little bit more. Currently we are converting about 2,000 tons of soda ash a day to caustic soda. As the caustic market gets longer, the caustic made from soda ash will have to back out of the market. This process has been going on for years, and in the alkali industry it has been understood that there would be a day when the production of electrolytic caustic would be greater than the demand. Whether electrolytic caustic will be converted to soda ash or used instead of soda ash depends on the economics of various locations. Currently, caustic soda is more expensive than soda ash; so if all you want is alkali, and don't need the strength of caustic, you prefer to buy soda ash.

We will not have any problems with soda alkalis or potash alkalis for the next few years.

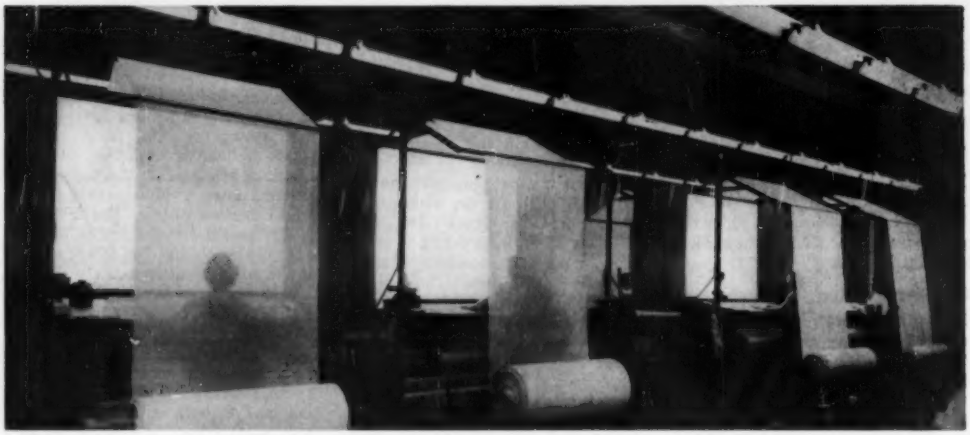
Sulfuric acid

NPA—We can produce about 13,000,000 tons a year of fresh acid. We are producing about 12,000,000 tons, or we did last year. We used better than 14,000,000 because sulfuric acid is something that can be used more than

(Continued on page 286)

Present at the conference that produced this information were: Edward K. Moss, Assistant Administrator for Public Information; Kenneth H. Klipstein, Director, Chemical Division, NPA; Frederic Arden, Chief, Inorganic and Agricultural Chemicals Branch; Louis A. Schlueter, Chief, Coal-Tar Chemicals, Dyes, and Intermediates Branch; Frank E. Bennett, Chief, Drugs, Solvents and Detergents Branch; Lowell B. Kilgore, Chief, Plastics and Protective Coatings Branch; Leroy C. Stewart, Chief, Facilities Branch; Osgood V. Tracy, Deputy Director, Chemical Div.; and Clyde La Motte, Office of Public Information.

COOL-WHITE SLIMLINE LAMPS are used in the weave room at Judson Mills, Greenville, S. C. Cool-white tubes produce 2,200 lumens per 40-w. tube as compared to 2,000 for daylight tubes. The slim line tubes have operated satisfactorily. Lighting level: 54 foot-candles.



DOUBLE-SIDED INSPECTION UNITS at Gerrish Milliken Mill, Pendleton, S. C., contain 24 40-w. daylight fluorescent tubes. Luminous panel on each side keeps lighting uniform and permits inspection from both sides.

New LIGHT On Southern Mills

RECENT LIGHTING INSTALLATIONS in several Southern mills point up these new trends in lighting.

1. Almost all lights—fluorescent, of course—were installed in continuous rows.

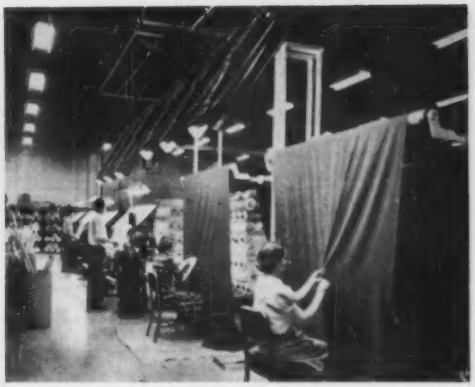
2. There is a slow but steady trend to cool-white lamps because of the higher lumen output for the same current, as compared with daylight tubes, and the more pleasant color of light produced.

3. Foot-candle levels at the working surfaces are going higher. The previous level in Judson Mills' weave room, as an example, was 17 foot-candles; now it's 54. Almost all lighting levels in these new installations exceed previously recommended standards.

THE COVER PHOTO

▶ Several new trends in mill lighting are pointed up by the picture on the cover of this issue of the weave room in Judson Mills, Greenville, S. C. Lighting intensity at the working level is 54 foot-candles—higher than the previously recommended level of from 25 to 50 ft.-c. Lights are slimlines mounted in continuous troffers. The lights are also mounted at right angles to the looms.

TREND TO COOL-WHITE LAMPS is also followed in Limestone Mfg. Co., Div. of M. Lowenstein & Sons, Inc., Gaffney, S. C. General lighting level in this roving department is 28 foot-candles. "Weatherized" top housing and porcelain reflectors minimize effect of humidity.



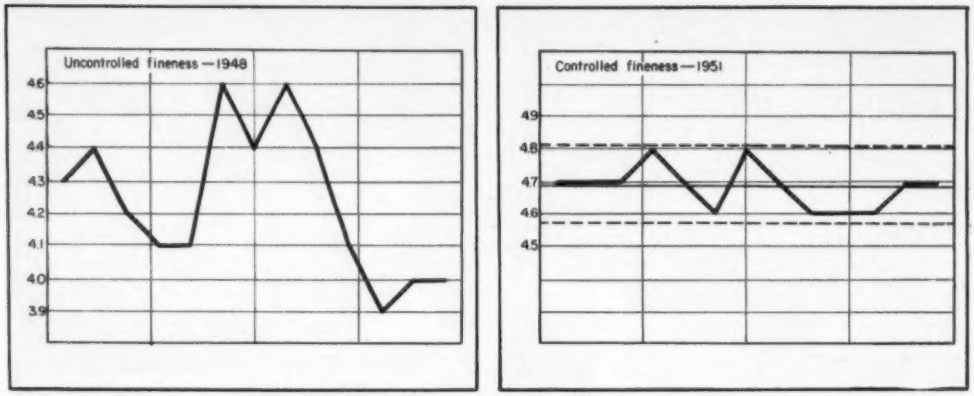
DAYLIGHT FLUORESCENT TUBES mounted in fixtures slanted to throw light on the fabric being inspected are used at Deering Milliken's Excelsior Finishing Plant, Pendleton, S. C. Lighting level is 30 foot-candles. Three-tube fixtures at high level provide general lighting.

TRICOT KNITTING and warping and slashing departments at Gerrish Milliken Mill have 45 foot-candles of light at working level. Tile walls and concrete floor contribute ot good lighting also.

FORTY FOOT-CANDLES of light are provided at the working level in this Gerrish Milliken plant weave room. Note also the large-diameter light-metal warp beams and overhead monorail.

CRITICAL SEEING TASKS at Hudson Hosiery Co., Charlotte, N. C., are eased by having 50 foot-candles of light at the working level provided by daylight fluorescent bulbs in Sylvania CR-150 fixtures.

HIGH-BAY AREAS in Deering Milliken's Excelsior finishing plant, Pendleton, S. C., are lighted by non-continuous, non-enclosed fixtures. General lighting level is 30 foot-candles.



IN A FILLING MIX when bales were not selected on a basis of fiber fineness, the fineness varied from 3.9 to 4.6 micrograms per inch during the first 3 mo. of 1948. This variation was reduced to 4.6 to 4.8 mg. during the same period in 1951 by selecting bales for the proper fineness.

How Pepperell Blends Cotton By FIBER FINENESS

Pepperell's present cotton-blending program is based on selecting bales for mill mixes according to fiber fineness. From the program, they get

- **Uniform quality, with less testing**
- **No more "blow-ups" in the spinning room**
- **Better manufacturing performance**
- **Fewer neps and better dyeing**

By J. B. DENMARK, Pepperell Mfg. Co., Lindale, Ga.

IN THE LAST SEVERAL YEARS, we in the cotton branch of the textile industry have come to know and appreciate the importance of the various properties of cotton. Previously, mills were operated strictly on a staple-and-grade basis, with little or no consideration for such properties as fiber fineness, strength, maturity, or distribution. The cotton was probably bought by some person not directly concerned with manufacturing, and it was up to the mill to run this stock regardless of whether or not it met the mill's needs.

Today, however, with high costs of raw material and labor, the quality-control laboratory is being used more and more to improve quality, increase production, and prevent "blow-ups" through the selection and use of cottons best suited to the mill's needs. Very little extra expense is involved.

Of course, the needs of one mill are naturally different from those of another and depend entirely upon the finished product; but regardless of whether the product is tire cord, broadcloth, industrial fabrics, or feed sacks, intelligent use of fiber properties in cotton will pay big dividends.

For the purpose of this discussion we will consider only the application of cotton fineness to the mix, since it is a property that can be easily measured and has a tremendous effect on quality, strength, and manufacturing performance.

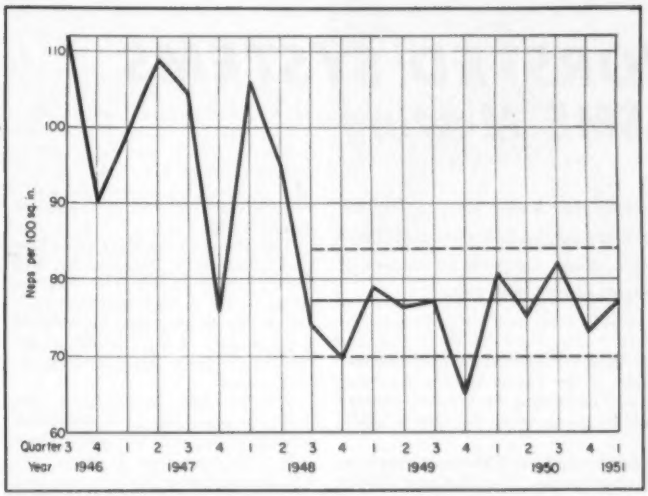
Fineness, of course, is expressed as the mean weight in micrograms of 1 in. of cotton fiber. If we have a cotton that is 4.2 in fineness, the mean weight of 1 in. of cotton fiber would be 4.2 micrograms.

Fineness is influenced by two factors: first, cell-wall diameter—which is a direct function of the type of cotton. Asiatic cottons generally have a large diameter, American Upland cottons a medium diameter, and Sea Island or Egyptian cottons a small diameter. The second factor influencing fineness is cell-wall thickness—which is dependent on variety and weather conditions.

Since most mills are using one type of cotton, say American Upland, cell-wall thickness is of more importance than cell-wall diameter. By the end of the first two or three weeks of the growing season, the fiber has reached its maximum length and diameter and then begins to add cellulose to its walls. If the fiber is able to develop thick walls, it is coarse; if not, it is fine.

Pepperell's Program

For the last several years at Pepperell, we have been "dabbling" with fiber testing and have gradually established a program whereby many mixes are made up from cotton selected on a fineness basis. We began with one of our most important filling mixes for a style of goods requiring a reasonably low nep count. Coarse fiber from various grades was earmarked for this mix, and the results were so satisfactory that we have



NEPS IN CLOTH during the first quarter of 1948 averaged 106 per 100 sq. in. of cloth. In the first quarter of 1951, the average was down to 77.

gradually been applying it to other mixes.

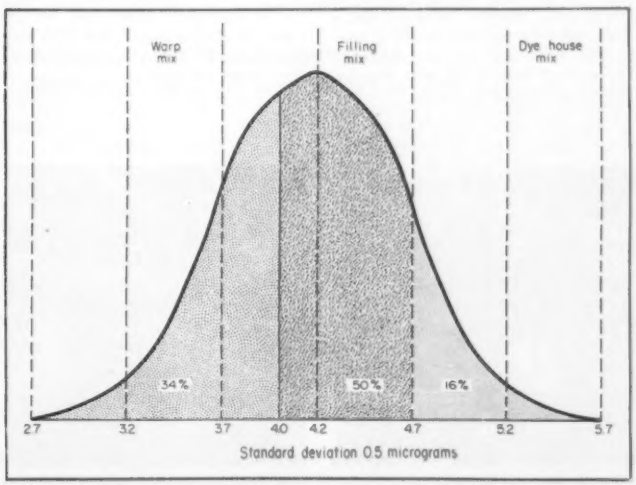
Our present procedure for selecting and running mixes with controlled fineness is as follows:

As cotton arrives at the mill, it is taken to the receiving warehouse to be weighed, classed, and checked for fineness. The cotton laboratory, located in this warehouse, checks every bale on the Micronaire and then separates the various grades and staple lengths into the correct mix relative to fineness.

We have found it advantageous to check every bale for fineness, since any one grade may go into any of several mixes.

From the receiving warehouse, all stock is put into permanent storage by grade, staple length, and fineness. It is then easily accessible for making up individual mixings.

Obviously, grade and staple length are still dominant factors for both economic and manufacturing reasons. Therefore, we must conform to certain grade and staple-length requirements in applying fineness requirements to the mixes.



BALES OF COTTON are assigned to these three mixes on the basis of fiber fineness and according to the requirements of the end product and the availability of cotton.

The range in fineness of cotton going into a particular mix largely determines just how the individual mixings will be made up. Should this fineness range be narrow, all cotton will be put in one fineness group and the bales taken at random for the individual mixings. On the other hand, if the range is wide because of the quantity of cotton needed for a mix, it may be necessary to divide the cotton into several fineness groups and take a percentage from each group to make up each mixing. This method provides satisfactory fineness control.

In a program such as this, it is necessary to establish a satisfactory quality level based on customer demands and the availability of stock to produce the desired quality. Outlets must also be found for the undesirable fineness levels, since it is impossible to reject all of the fine cotton and use only coarse stock in order to maintain a desired quality level. However, cotton merchants are now beginning to include fineness along with their price quotations.

As an example of our system at work, let us consider three of our mixes made from a mixture of 15/16-in. and 1-in. SMG, MS, SLM, and SLMB cotton. From analyses of shipments in previous years, we may expect the standard deviation of fineness to be 0.5 micrograms. Based on this year's 4.2 mean we established the following bale distribution by fineness levels for specific types of work.

Warp Mix—Can conceal neps caused by fine fiber. Fine fibers add some strength in manufacturing. Fineness level: 2.7 to 4.0 mg.

Filling Mix—Low nep count as a result of medium-coarse cotton. Fineness level: 4.0 to 4.7 mg.

No. 2 Dyehouse—Low nep count and even dyeing as a result of very coarse cotton. Fineness level: 4.7 to 5.7 mg.

At Pepperell, we've found the chief advantages of controlling fineness to be:

1. Consistent mixes that—
   - Maintain quality level and require less testing
   - Maintain twists and mechanical set-ups in the mill
   - Give no "blow-ups" in the mill
   - Improve manufacturing performance
2. Improve quality by—
   - A. Reducing neps
   - B. Giving better cleaning (coarse cotton cleans better).
   - C. Giving better dyeing

From our experience, we are fully convinced that a program of cotton testing is well worth while and will mean much to the industry as a whole.

"Short-Cut" WORSTED SYSTEMS Explored at ASME Meeting

► **The Saco-Lowell worsted-spinning system, the Whitin American system, the McCann 100-pot spinning frame, and the Pacific Converter each takes its turn in the spotlight as Textile Section, ASME, continues its analysis of mill modernization. Here are the highlights of each talk given.**

"Let's clear up the confusion about the 'short-cut' worsted-spinning systems" was the central idea of the recent meeting of the Textile Section, American Society of Mechanical Engineers, in Boston. The meeting was the best attended and most successful of the series being held by the group on the theme: ASME Analyzes Mill Modernization.

Speakers from Whitin Machine Works and Saco-Lowell Shops explored the operation of their respective worsted-spinning systems. The McCann 100-pot spinning frame and the Pacific Converter were also discussed in papers. Important sections of these talks, especially those parts containing new material, are given on these pages.

The first performance report on the new 100-pot McCann pot-spinning frame installed at Abbott Worsted Co. was given at the recent meeting of the Textile Section, ASME, in Boston. After describing the principles of operation of the machine [TW, Apr. 50, p. 124], John J. McCann, inventor and builder of the unit, described the performance of the first commercial-sized frame in operation. His report follows:

The McCann 100-Pot Spinning Frame

By JOHN J. McCANN

The 100-pot spinning frame operates at 10,500 rpm. So far we have only run worsted yarn on it. However, on a similar sample frame that we use for experimentation, we have run at 11,500 rpm. Such widely diversified yarns as worsted, jute, nylon, Orlon dynel have been spun. By disconnecting the drafting and using only the front rolls we have inserted twist in paper, continuous-filament rayon, and from a woolen-system roving in woolen, dynel, asbestos, paper, cotton waste and blended yarns. Using a cotton-drafting system we have spun staple rayon and cotton. Some of these yarns have until now required sharply differing equipment. We handle them all on our one worsted system frame.

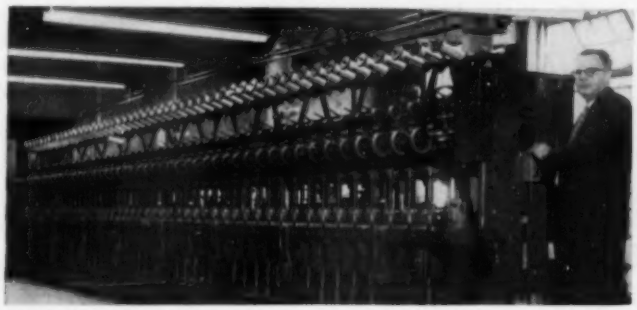
The counts on the above yarns have varied from 4s to 80s, and the twist from 1¼ turns to 27. The front-roll speed is not a limiting factor as it can be in ring-spinning of low-twist yarns because of the inability of the operator to piece up a too-high delivery speed.

The packages produced on this frame are under the 1¾-lb. maximum capacity of the pot, and weigh about 1 lb. We have spun in larger pots 4-lb. packages of nylon yarn and have made similar packages on the twister up to 4½ lb.

Our tests on the McCann system have shown that it is easy to maintain a reasonably correct count, and that the twist is very uniform. The individual motor runs at a constant speed, and therefore twists throughout the package are uniformly constant. This evenness of twist could not be obtained without the individual induction-motor drive. Here, there is also a fringe benefit. In ring spinning, frame twist is 5 to 7% higher than actual twist, but in pot spinning with an individual-motor drive, there is no slippage and the frame twist is the actual twist that results in the 5 to 7% increase in production for the pot.

We have made many tests on the yarns for evenness and find that pot-spun yarns are at least as even as those from other systems.

The pots on the McCann 100-pot



FIRST PERFORMANCE REPORT on the recently completed 100-pot McCann pot-spinning frame told of 10,500-rpm. pot speed, counts spun from 4s to 80s. John J. McCann, inventor, is at right.

YARN FROM POTS is wound onto packages at Abbott Worsted Co. by placing a draw-off head on the pot-spun package.

frame have a 6-in. outside diameter and require about 200 w. or 1/5 kw. to operate. In case of spinning 8s with 3½ turns, the production is about 1 lb. per hr., which is about five times what can be produced on a ring frame, so that in this case there is little or no difference in power cost per pound of yarn produced. However, as the twist per inch and counts increase, with a corresponding decrease in production—in other words, as we spin finer yarns—the power cost per pound of yarn naturally increases. It is possible in pot spinning to spin a very fine yarn in a large package with a high twist per inch. Of course, it would require weeks to make a maximum-size package, and, as you would expect, it would consume many kilowatt hours to whirl so enormous a package for this excessively long time.

Authorities on the well-established pot spinning of the rayon industry state that it is the practice of that industry, as it will be of the users of the McCann system, to produce at the lowest possible speed—for power economy—the largest package that can be spun in 12 hr. This practice means, in effect, the user of the McCann system has his choice of spending more or less per pound for power.

There are, therefore, two ways in pot spinning, as there are two ways in ring spinning, to reduce the power cost per pound of yarn produced. You can reduce either the diameter, and/or the speed. In other words, if our 6-in. pots were reduced from 10,500 rpm. to 7,000 rpm., the watts would drop from 200 to 75 or 1/10 hp. If reduced to 3,500 rpm. it would require about 25 w. or 1/30 hp. to operate. Correspondingly a 4-in. diameter pot would require about 90 w. to run at 10,500 rpm.

PACKAGES UP TO 4½ LB. of woolen, worsted, nylon, rayon, jute, dynel and other yarns were shown by Mr. McCann to demonstrate versatility of the pot-spinning frame.

The operator does a complete servicing job at the time of the removal of the full package. The motor is stopped, the aluminum sheet injected, the pot brake applied, the spun package removed, the new sheet attached, the motor restarted, the empty roving spool removed, the full roving spool put in place, the new roving fed through the drawfield to start spinning the new package. It now takes less than 1 min. to do this complete servicing job, and my developing experience convinces me that the 100 pots can ultimately be serviced in an hour. This service time of about 1 min. per package will be the major direct-labor cost of spinning a package. It will also be necessary, of course, to supply labor to watch the frame during spinning, to handle the packages and roving, and to piece up an occasional end. I say "occasional" advisedly because on the McCann frame which we are now running, the average ends down per 100 spindles per hour when adjusted to normal ring spinning speeds is about 1 per hr.

If our package were increased to 3 lb. being spun from a 3-lb. roving supply, the direct labor of servicing would not be increased. Thus this direct labor cost will tend to remain constant for all counts of yarn.

There is also labor saving with the McCann system in winding and twisting as a result of the large size spun package. It is our experience that an operator can run about twice her normal amount of ends and wind over three times more yarn from the larger-size pot package.

In pot spinning there is very little soft waste because laps are not necessary at piecing up, and occur only at rare intervals at the time of a broken end. Again the roving is allowed to run out completely and there is no opportunity for the spinner to waste the end of a roving spool for convenience. This soft waste amounts to about 1/10 of 1% and is, therefore, negligible.

Fly can account for a lot of waste of which there is but little value. The pot twists directly to the nip and tends to seal the fiber into yarn. The yarn is spun about its axis and does not beat against a separator that can cause the yarn to shed a great deal of its short fiber.

It becomes reasonable, therefore, to expect a very substantial reduction in waste and a corresponding very high yarn yield from pot spinning. One can expect a 1, 2 or even 3% greater yield.

The Saco-Lowell Worsted System

By **GILBERT D. HARRISON, JR.**, Research Dept., Saco-Lowell Shops

The Saco-Lowell system of making worsted yarns is only in its infancy, the first commercial installation having been made in 1950. Frames are now being built for this same mill that will double the size of its installation. Although the total number of spindles running commercially today is not large, widespread interest is indicated by the number of sample installations that have been made. Besides the domestic mills so equipped, Saco-Lowell worsted machinery has been shipped to Italy, Holland, Egypt, South America, and Australia with all mills reporting enthusiastically on the results obtained.

Statistical evaluation of the yarn produced in comparison with that produced by the traditional worsted systems is difficult to obtain because of the lack of uniform standards for worsted yarns. There is also the question of variations in wool from lot to lot that affect the quality of the yarn produced. We do feel, however, from tests that we have made on the Uster tester and the seriplane, that yarn produced on the Saco-Lowell worsted system compares very favorably with that produced on the French or Bradford system in evenness and appearance.

One New England mill recently purchased a sample SS4 frame. This mill made yarns for the body of the cloth on a conventional worsted system. Since purchasing the sample frame, the mill has made its own yarns for worsted pin stripes on the Saco-Lowell system.

The versatility of the system was demonstrated at the Atlantic City textile show in May of last year. There

3-OVER-4 DRAFTING PRINCIPLE is described by Gilbert D. Harrison, Jr., Research Dept., Saco-Lowell Shops, during his talk on the Saco-Lowell worsted-spinning system.

64s wool having some fibers up to 6 in. in length were processed on the drawing frame. The FS4 roving frame was drafting 50/56s wool having a

staple length of 7 in. On one side of the spinning frame 50/56s wool was being spun into 13.3s yarn (cotton count). The other side of the spinning frame was spinning 64s wool into 21.4s yarn (cotton count). Drafts run were as follows: drawing frame 13.0; roving frame 10.8; and spinning frame 13.3 and 14.3.

The economics of the Saco-Lowell worsted system have not as yet been fully realized because of the relatively small size of installations. However, the manager of a mill in Australia has recently advised that he expects eight spinning frames to start with a maximum of five girls, including doffers, cleaners, and creelers. He also will have one operator on the roving frames supporting these eight frames and one on the pin drafters. This total of seven persons compares with 21 formerly required for a similar poundage.

An American worsted-yarn mill that has installed a unit consisting of FS4 roving and SS4 spinning reports a reduction of approximately 20% in labor cost, a 2% saving in waste, and a 50% reduction in defects found in the spun yarn as compared to similar yarns made by the same mill on a conventional worsted system. This mill is producing yarns for the knitting trade. Nevertheless, one of the largest converters in the trade told the mill's management that the yarns were among the best he had ever seen. The mill is currently running 50/56s top through two operations of pin drafting to reduce it to 45 gr. per yd. The sliver is made into 2.5-hk. roving and spun into 18s yarn with 8 to 9 tpi. (all numbers are worsted count). One operator is running five pin drafters, one operator is running three 96-spindle 10x5 roving frames, and a spinner about 530 spindles. On 28s yarn with 12¼ tpi. the spinners have run 800 spindles. Wool as fine as 64s and yarns up to 40s have also been run. As may be expected, the greatest economies are made in spinning the finer yarns counts where full advantage can be taken of long drafts.

The American System

By **CARL D. BRANDT**, Fiber & Process Research Consultant, Whitin Machine Works

The name "American System" was first suggested by a worsted spinner [François Cleyn, Pres., Spinner's Ltd., Huntingdon, Que., and Consulting Editor for Worsted Spinning, TEXTILE WORLD] who, while watching early experiments, had concluded that here was a unique method for spinning worsted top that was quite different from the conventional French and English systems and therefore deserved a new name. However, the present system is not limited to any one fiber but will handle both natural and synthetic staples in most any combination. The only limitation at the present time is that the fibers do not exceed 7 in. in length.

With the introduction of the pin-drafter, improvement in the sliver quality allowed the production of superior yarns. Today the recommended installation would include pin drafters or gills for the first three operations of the complete system. The pin drafter is also more efficient as a blender of fiber; and, when used in conjunction with the tow converter, quite satisfactory yarns of some types may be produced.

Starting with a 50-gr. sliver in back of the roving frame, it is quite possible to draft, in one operation, up to about 25. This high draft means that roving of approximately 2 gr. per yd. would be produced. Based on the cotton system of numbering, this roving would be about 4.00 hank. This roving in turn would be suitable for spinning 40s worsted count.

Normally this is the recommended limit when using but one roving operation. However, if finer yarns are desired, it is possible to add a second roving stage that allows a finer hank and consequently finer yarns at the spinning frame. Since the normal twist in these rovings is rather low, the production of the machines is rather high. The actual weight produced per spindle will naturally vary with the hank produced. Since the machine is quite simple in operation and requires no highly skilled help for satisfactory operation, work loads are normally higher than those that one usually finds in the regular worsted mill.

The long-draft spinning frame uses the double apron as the method of control, and drafts up to 15 or 16 may be used satisfactorily. Spindle speeds and ring sizes will compare with those used on any other system as the frames can be built to any mill requirement. It is common to spin, for example, 24s worsted on a 2¼-in. ring with spindle speeds in the neighborhood of 7,200 rpm. Here again, work loads well above those found in a worsted mill are quite common because of the simplicity of the machine and its operation. Quite often the work assignment is divided in a fashion similar to that used on cotton mills in that the spinners will take care of creeling bobbins, piecing up ends, and cleaning the roll beam. Doffing will be done by a team of doffers, while the cleaning will be done by other hands.

At the spinning frame, it is generally advisable to spin from double roving in the creel. The worsted spinner prefers a single end as it makes the operation of the machine simpler. It has been found out, however, that using double roving results in a better yarn. But if the required quality would allow the use of single roving, there is nothing in the operation that would prevent its use.

As the system operates today, any commercial top, either French- or Noble-combed, may be used. If and when top quality is improved, still better yarns may be spun. Present quality of top varies over too wide a range.

"OVER A QUARTER OF A MILLION SPINDLES of American-system worsted-spinning are in operation today," said Carl Brandt, Fiber and Process Research Consultant, Whitin Machine Works, in pointing out that the system is here to stay.

The questions of blending and reduced doublings are often brought up and cited as weak points. True blending cannot be obtained by placing ends side by side; therefore eliminating doubling in later processes has very little effect on actual blending. If one wishes, one can use a melanger or a cotton-type ribbon lapper, and quite satisfactory blends may be made after combing. The large number of doublings used on the conventional worsted system was required to eliminate irregularities introduced by the earlier processes. Because of improved systems of control now used, these irregularities are eliminated at the source, and therefore fewer operations are required. As a result, the loss of stock in converting from top to yarn can be kept to 3½% or less. With the price of top at the present high level this low loss becomes very important as it represents a substantial money saving.

That the American System is well

on its way cannot be questioned, as over a quarter of a million spindles are in operation today. Its flexibility and economy, both of installation and operation, are factors that cannot be overlooked. In the market in days to come this system will have an opportunity to prove its real value and the soundness of its basic principles.

The Pacific Converter

By ROBERT WILLKIE, Director of Engineering Research, Pacific Mills

Many types of tow available

We have at present tow or continuous filament in nylon, Dacron, viscose, acetate, Vicara, and dynel. We anticipate in the near future to have Orlon and Acrilan tows.

The physical characteristics of any of these present tows are near perfection. The strand or tow sliver is uniform in short- and long-cycle variation. The filaments are parallel and individual. The consistency of each filament's physical structure is uncanny, especially in comparison to the normal variations of natural fibers. It is available in filament fineness from 1.5 denier, equivalent to Vicuna and silk, to 20 denier or more, which gets into a fairly coarse filament or even wire class. Depending on the total denier per tow, we get up to over 15,000 yd. of a single continuous strand per carton.

With continuation of the effort to improve quality, the increasing amount of tow being made available, and the increasing number of new filaments, the outlook of base material for processing over the converter is good.

What does the converter do?

1. It converts in a single operation any continuous textile filament into a sliver of predetermined fiber length at a rate of better than 100 lb. per hr. net, and at a cost of less than 3¢ per lb., including royalty and all charges, direct, indirect, burden, etc.
2. It can cut the continuous filament from 1½ in. up to 9 in. in length. We limit it to 9 in. maximum because that is the longest we have cut to date. Longer lengths are possible.
3. It can cut a straight or variable-length diagram such as all 3 in. or variable from 2 to 14 in., 3 to 6 in., or you name it.
4. It can process two or more different types of tow such as viscose and acetate, etc., or different deniers simultaneously.
5. It can combine synthetic and natural fibers.
6. In the case of blends, either of synthetics or synthetics and natural fibers, it has a maximum control of percent blend.
7. It can reduce the maximum staple of natural fibers to match the length of synthetics being cut.
8. It does not alter the physical characteristics of the original filament.
9. It produces a sliver of the desired staple length either 100% or in combination with other synthetics and/or natural fibers that can be pin drafted three times, roved, and spun as the total number of operations required from base material to yarn.

To supply the cutting action with a properly prepared sheet of continuous filament, we must provide a creel to assure proper withdrawal of the tow from the carton or package, to maintain a parallel array of the filaments, to eliminate false twist, and to form a sheet of filaments 12 in. wide and as uniform in thickness as possible, totalling 2,000,000 denier or 3,150 gr. per yd., which represents the cutting capacity. Because of the exceptionally long lengths of continuous tow supplied, the infrequent recharging of the ends of tow fed, and the tremendous strength of these individual tows, we can legitimately devise some pretty fancy creels. To date, the best one takes the tow straight up to the ceiling 10 to 14 ft. above each carton and then guides the tow on through tensioning rods to a plating device just before the converter itself.

Second, the cutting action is brought about by rotating two rolls against each other under a 2½-ton pressure. The bottom roll is a smooth, hardened mandrel roll with a 14-in. face. The top roll, instead of being smooth, carries a series of hardened helical threads at ¼ in. pitch intervals, with synthetic rubber between and an actual threaded face of 13 in. The included angle of the thread is 29°, and the tip of the thread is ground to an approximate 1/64 in. flat. The cut is instigated by the crushing or shearing action of this 1/64-in. flat being forced down through the filaments, which are in turn backed up by the bottom mandrel roll. In continuous processing, the two steel surfaces never come in contact with one another but are spaced apart by a very thin film of the compressed material being cut. In most instances, the resultant cut is just as effective as a cut with a sharp pair of scissors. With variations of moisture content, amount and type of finish, and thickness of mass being cut, even a very sharp pair of scissors will cause a definite bond at the tips of cut fibers.

TOW MADE OF NYLON, Dacron, viscose, acetate, Vicara, and dynel were shown by Robert Willkie, Director of Engineering Research, Pacific Mills, in describing raw material that is available for the Pacific Converter.

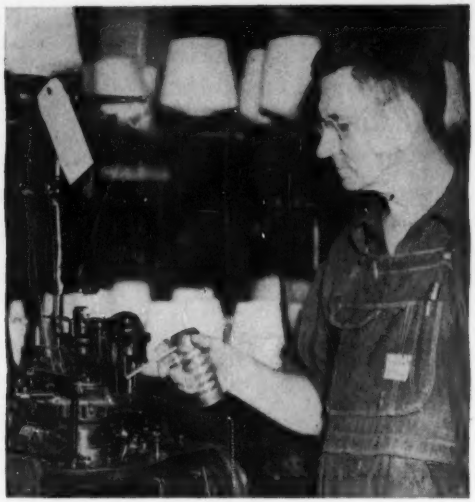
The advantage of this technique is that there is nothing to get dull because of the use of the 1/64-in. flat cutting face. On highly abrasive materials such as nylon, a ¼-in. razor-sharp edge can be used to cut approximately 300 lb., at which time it must be resharpened to continue cutting. The scissor edges would likewise become dull and require frequent sharpening. We have had several cutting rolls in continuous operation for two to over 3,000 hr. without any attention whatsoever. We recommend, however, that a schedule be established to stress-relieve the cutting surface of the top threaded roll by grinding off ½ to 1/1,000 in. every four to six months, depending on the extent of continuous use.

By reforming the width of the thread back to the 1/64-in. flat as the diameter of the roll is ground down and even to the extent of deepening the base of the thread itself, a reasonable expected cutter-roll life should be at least ten years, barring misuse.

Another interesting feature of this technique of cutting can probably be best cited by giving the following example. Assume a 3-in. cutter roll with 26 instantaneous cutting faces of 1/64-in. flat each. The cut is made on a sheet of filament 12 in. wide and approximately ¼ in. thick. If the 1/64-in. width and ¼-in. depth were completely taken out of the sheet as delivered by the cutting rolls due to the pressure type of cut with a flat, we would have nearly 4% waste in processing. Instead, year in and year out, we can convert and process through

(Continued on page 242)

Mill Mobilization Manual



A Complete LUBRICATION MANUAL For Circular-Knitting Machines

▸ Long knitting-machine life is important these days—and long life depends on good preventive maintenance. Here's a complete step-by-step cleaning and lubrication procedure based on mill practice and manufacturers' recommendations that can not only prolong machine life but can improve production and quality as well.

By BRUCE M. DUNHAM
Technical Consultant, Industrial Products Dept., Sun Oil Co.

Circular-knitting machines are produced by many manufacturers in many designs. The method of cleaning and lubricating described here is an attempt to consolidate general requirements. Individual mills may find it necessary to deviate to some extent from these procedures because of the special requirements of some designs or because of variation in the methods provided for application of lubricants.

The method herein recommended is based upon a study of existing plant practices and is considered to be the best procedure employed for adequately maintaining this equipment from the standpoint of proper cleaning and lubrication.

EXPERIENCE HAS SHOWN that circular-knitting machines that do not receive regularly scheduled cleaning collect excessive amounts of lint and dirt.

The result is clogging of vital working parts and the production of irregular goods. In addition, if properly scheduled lubrication is not carried out, excessive wear, unnecessary rusting and corrosion, and breakage of metallic parts will result. A well-organized preventive-maintenance program will do much to keep down replacement-parts costs and keep up production efficiency.

FIRST COMES CLEANING

A regular procedure should be followed by operators in cleansing the machine of dirt, accumulated size, and lint. It is recommended that cleaning be conducted in the order of the steps indicated.

A. Upper Frame, Cylinder, and Dial Assemblies

1. Blow accumulations off stop-motion assemblies and all parts above upper frame. Use an air hose fitted with a suitable nozzle. The direction of the air stream should be such as to blow dirt and lint away from the yarn carriers.

2. Large lint accumulations should be picked off needles, sinkers, and associated parts.

3. Start machine. Direct air blast upward through needles and sinker slots to remove as much contamination as possible from dial and cylinder grooves. It is expedient first to blow off lint particles from the inside because most of the lint lies on top of the needles and sinkers, and is easier to remove. If the air pressure is initially directed downward, it has a tendency to force and compress lint into the slots, out of which it is less easily removed.

4. Direct air blast downward through needle and sinker slots to blow out particles not removed by up-blast.

5. (Optional). If needles, sinkers, and grooves are contaminated with dirt that cannot be removed by air blowing, brush or spray these parts with mineral spirits; then allow to dry for 15 min. before oiling. When mineral spirits are used, care should be taken to observe plant safety precautions to prevent fire.

6. (Optional). If needles, sinkers, and grooving are caked with size from sized yarn, spray them with a suitable size solvent. After cleaning, the parts

should be oiled to prevent rusting because most solvents contain moisture.

Such a cleaning (particularly steps 1 through 4) should be accomplished once a week. If accumulations are so heavy that they may interfere with the production of quality goods, then the cleaning procedure should be conducted more often.

The above procedure is also applicable to needle and sinker assemblies on automatic circular-knitting hosiery machines. For new or tight vertical-cylinder assemblies on automatic circular-knitting hosiery machines, some manufacturers recommend the following special procedure:

1. Blow with air blast to remove lint and dirt accumulations.
2. Brush with mineral spirits. (Machine should not be operating). Allow to dry.
3. Blow powdered mica or soapstone into sinker grooves with hand-operated gun, either turning over machine by hand or operating for 5 min.
4. Stop machine. Reflush with mineral spirits while turning machine by hand.
5. Spray or brush mechanism with light coat of light machine oil. (Observe fire-prevention precautions during Steps 2 and 4).

This procedure should be used only on new or tight assemblies because too frequent use of powdered mica or soapstone will cause excessive wear on the parts involved.

B. Cam Sections

It is not practical in most designs to attempt to clean cam mechanisms as often as dial and cylinder assemblies. Normally, good lubrication will tend to flush fine lint and dirt out of the cam section. The cam section should, however, be cleaned at least once every six months in order to remove any accumulations that oil flushing will not dislodge.

Some models may be cleaned by using solvents, while others may require disassembling and cleaning.

C. Pattern Wheels

It is good practice to blow contaminants off pattern wheels at the end of each roll. If hardened accumulations form, they may be removed by brushing with mineral spirits, or the pattern wheels may be removed and soaked in spirits or Stoddard solvent. After the dirt has been loosened and removed, the wheels should be dried with a clean rag and oiled at once to prevent rusting.

Most manufacturers recommend the above flushing procedure daily. In some plants, where contaminants do not accumulate very rapidly, cleaning may be less frequent.

THEN—LUBRICATION

While some makes of circular-knitting machines are equipped with different kinds of lubricating appliances, the majority are provided with either oil cups, oil holes, pressure fittings, or a combination of these. Lubrication with oil is accomplished through the use of an oil can or a spray gun and grease by a pressure gun or brush.

The following lubrication procedure is thorough and adequate. It is followed by most mills.

A. Needle and Sinker Section

1. With machine in operation, light machine or needle oil having a viscosity of from 100 to 150 S.S.U. at 100°F. should be poured directly on the needles and sinkers from an oil can for one revolution of travel. If machine is equipped with bottle oilers, the oil (about ½ oz.) should be allowed to flow from the oilers for one revolution of the machine.

2. A fine spray of the same oil should then be directed at the needles, sinkers, and sinker butts. Be sure the oil is injected into dial and cylinder slots for one revolution of the machine.

3. Dry compressed air should then be directed along needle and sinker slots to remove any excess accumulation of oil and also any dirt particles loosened by the oil.

It is common practice in most mills to lubricate needle and sinker assemblies either at the end of each shift or at the end of each roll. Some operations require more frequent application. Each plant's maintenance department should set up a schedule that will offer best results depending upon operating conditions.

B. General Lubrication

Miscellaneous plain bearings (frame, thrust, wheel rub, etc.) are provided with easily accessible oil holes or oil cups. They should be oiled once each shift with a medium grade of machine oil having a viscosity of 300 to 400 S.S.U. at 100° F. Care should be used not to lubricate excessively so that the oil flows over adjacent parts or onto the floor.

In some models, the sinker butts are not lubricated as part of the needle and sinker section and thus must be separately oiled once per shift with a medium-grade machine oil.

Pattern wheels require only a drop or two of medium machine oil on the bushing of each wheel at the end of each roll. Either needle oil or medium machine oil is satisfactory. However, because medium machine oil is a heavier, more tenacious grade, it has a tendency to cling to the bushing for a longer period of time.

A light machine or needle oil (100 to 150 S.S.U. at 100° F.), not containing tenacious or soap-thickening compounds, should be used for complete oil lubrication of automatic circular-knitting hosiery machines. If a heavier oil is used, there may be a tendency to adversely effect the operation of such parts as wrap selectors, wrap fingers, and selector springs.

Open gearing such as ring gears, take-up mechanism worm, or bevel gears and pinions may be lubricated with medium machine oil or grease. The frequency of application with oil should be daily. If grease is used, weekly application is satisfactory.

Some models incorporate grease fittings on bearings. These should be lubricated once each day.

Electric motors generally are equipped with grease fittings and require regreasing semi-annually with a stable sodium-base grease.

Type of Lubricants

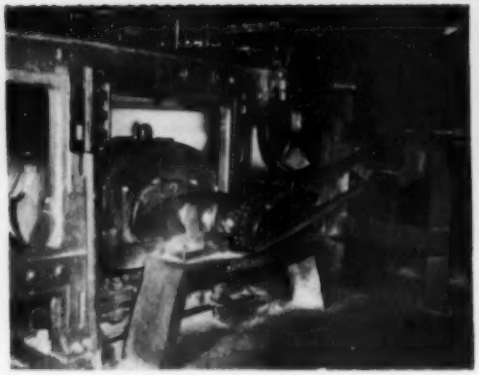
Today, more than ever before, it is important that every possible care should be taken to insure long life of existing equipment. Lubricants play a big part in getting the best performance, protection, and economy desired in the operation of a mill. In the past few years the petroleum industry has made great advancements in the types and quality of lubricants. New oils and greases have overcome most of the difficulties previously experienced by the knitter. Some of these difficulties have been permanent oil staining of goods (stains that will not wash out), discoloration of goods in storage due to decomposition of oil, rust and corrosion of machine parts under the relatively high humidity of the knitting room, excessive wear and breakage of parts due to insufficient film strength of the oil, and excessive power consumption partly attributable to the type of lubricant used.

Multi-purpose oils for needles as well as general machine lubrication are now available. They eliminate or appreciably minimize these problems. Adhesive-type greases are also currently used for application to gears, slides, cams, and applicable bearings. Adhesive greases cling tenaciously to these parts and minimize spotting of fabric. Dripping onto adjoining parts or onto the floor is also minimized.

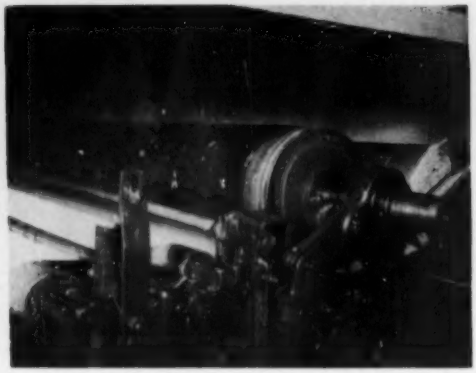
The Oiler Makes the Difference

Proper lubrication of circular-knitting machines depends as much upon the person responsible for this phase of equipment maintenance as it does upon the use of the proper lubricants. It is of utmost importance that individuals responsible for cleaning and

(*Continued on page 236*)



EFFICIENCY INCREASES of from 5 to 10% were reported by nine mills as a result of using multimotor drives.



SYNTHETIC ROLL COVERING was favored by almost all mills. Less maintenance was the principal reason given.

SLASHING—
As Discussed by Georgia Mill Men

▶ The Fall meeting of the Textile Operating Executives of Georgia was held at Georgia Institute of Technology, Atlanta, Ga., recently. Here's the summary of their discussion on slashing. Watch next month for what these men said about weaving.

Homogenized Size

In answer to a question on the method of homogenization in use, five out of six mills answering reported that they use the precooked-slurry method. One mill, with a Scott & Williams unit, uses cold slurry.

Homogenization, it appears from the discussion, is working out satisfactorily. One mill claims better results on some weaves than on others.

There was some division on the matter of uniformity of viscosity. Some mills (more than half) say that viscosity is more uniform, but others are not sure of any difference.

Most mills find no difference in pickup. One mill found small increase with homogenized size, but another noted a small decrease.

To maintain the same pickup, one mill finishes with 205 gal. homogenized instead of 187 gal.—both with 200 gal. initially.

As far as weaving efficiency goes, the general feeling was pretty well summed up by a superintendent who said, "We feel that weaving efficiencies are as good or better on homogenized warps, although other factors make it difficult to determine the exact difference." The same comment applies to the shedding with homogenized size as compared with boiled size.

Most mills heat the slurry to 205° F. before homogenization. One man lets his mix stand for 10 min. at this temperature before homogenization.

The greatest savings attributed to homogenization are apparently found in changing from thin-boiling to pearl starch, and in steam consumption.

AL JOHNSON of West Point Mfg. Co., West Point, Ga., led the slashing discussion.

Running Two Size Boxes

The three mills that answered the question on the difference in size pickup between the two boxes all reported a difference. The actual amount varied from 0.33% to 2.0%.

The thinking is that the bottom sheet of yarn on the cylinder dries first and steals size from the top sheet. One mill remedied the situation by having one sheet of yarn contact just the first cylinder, the other sheet contact just the second cylinder, then bring the two together at the third cylinder of the slasher.

In checking the amount of size on the yarn, one mill reported that the acid-alkali method is used. A standard sample is not taken because the yarn is checked frequently.

Synthetic Squeeze-Roll Covering

Of the 14 mills that gave an opinion on this subject, 13 of them said that a synthetic covering on the back squeeze roll is working out satisfactorily. Most mills agreed, however, that they hadn't had any luck with the new coverings on the front rolls or on the calender rolls.

The rubber-type covering being used is durable and reduces maintenance costs. One mill said, "Even if only because it doesn't collect lint and doesn't get tacky, this kind of roll covering is practical."

Buffing is done when ridges start to show on the roll—and this happens in about six months at one mill running three shifts.

Most of the mills reporting said that they used multimotor slasher drives.

Size pickup and stretch are the same with synthetic coverings as they were before, according to a majority of the mills.

Slasher Runouts

For even runouts, the mills report that the following items should be watched:

At the warper—

1) tension
2) slippage

At the slasher—

3) tension on section beams

Warper cylinders should be properly knurled to prevent beams from slipping on the cylinder. One mill makes all section beams of each set on the same warper to increase uniformity.

Yarn strength and size penetration are affected by the amount of tension and stretch at the slasher, says one mill. The same superintendent made this statement: "No factor in slashing affects weaving efficiency as much as the tension exerted on the warp yarn."

Several mills use ball bearings on the section beams to assure even tension. Extra weights are often added to the beams closest to the slasher to compensate for the varying distances between the slasher and the closest and farthest section beams. One mill uses a 4¼-lb. weight on the back beam and an extra ½ lb. for each successive beam to the front. For the first few hundred yards, this mill uses an extra 3-lb. weight on some of the back beams.

A positively driven drum creel is being used by one mill with favorable results.

There was general agreement in the reports that tension in slashing should be as low as possible, and that uniformity of tension is equally important.

On wet beams, the mills decrease yardage from front to back of the creel —35 yd. per beam in one case. When wet and dry beams are run in the same set, yardage on the wet beams is varied to make the set come out even.

How much difference between section beams should be allowed? One mill says that whenever the length left on any beam exceeds 25 yd., the overseer checks back to find out how it happened. Another mill says that its standard is the length from creel to loom beam. Most mills reported the standard difference at between 1/10 and ¼ of 1%.

OLD AND NEW—Robert J. McCamy (right) was snapped after talking with H. M. Jackson, whom he succeeded as General Chairman of the Georgia TOE.

For example, on a 13,000-yd. basis, 405 ends of 14.5s yarn, four dry white section beams, the standard difference between beams is ¼ of 1%.

How much waste at front and back? The best report was 0.08% at the front and 0.10% at the back, for a total of 0.18%. Other front wastes ranged up to 1.0%. The highest total waste reported was 1.25%.

Here's how three of the mills handle runouts.

"We let the sheet of yarn go through the size and over the cylinder until it reaches the large lease rod. Then the slasher is stopped and the full beam removed. The empty set is then cleaned out and we prepare for the next set."

"When the first beam in the creel runs out, we stop the slasher with these loose ends at the back of the size box. The dip roll is then wound up, the size is dropped, and the squeeze rolls washed. The set is cut out at the back of the size box, and the remaining yarn is pulled off the beams. A new set is loaded, pulled over, and tied in. Lease strings are put in as the slasher is moved up. When the strings get under the squeeze rolls, the dip roll is lowered into the size. When the good yarn that was left on the cylinders is wound on the loom beam, it is doffed and an empty beam is inserted to pull the new set through. After the new lease is struck and the rods are inserted, the soft yarn is pulled off the beam and the slasher started on the new set."

"In starting up a set, we pull over the five back beams and then start inserting lease strings, alternately inserting a lease string and pulling over until yarn reaches the size box. There we tie onto the old set. The knots are pulled through the size box, and the rest of the lease strings are put in. We sandwich a sheet of yarn between two pieces of masking tape about 2 yd. ahead of the lease strings. Then we pull the tape through the size box and stop the slasher. Size is drawn into the size box, the slasher is started and run until the masking tape is in front of the comb. We then strike a lease and run the strings. When the first section beam runs out at the end of a set, the yarn is marked and run over to the comb. Then the warp is doffed."

New officers of TOE of Georgia are:

General Chairman

Robert J. McCamy, Pepperell Mfg. Co., Lindale, Ga.

Vice-General Chairman

T. M. Hampton, Hillside Plant, Callaway Mills Co., Calloway, Ga.

Executive committee—new members

Prentiss E. Findlay, Jr., Bibb Mfg. Co., Macon, Ga.

George McMillan, Crystal Springs Bleachery, Chickamauga, Ga.

Robert W. Lawson, Chicopee Mfg. Corp., Gainesville, Ga.

Electronic Moisture Controls

Both the constant-speed and the constant-pressure types of controls were discussed.

One mill is having trouble with maintenance of a constant-speed unit, but when the system is in operation, production is increased and the warps are better.

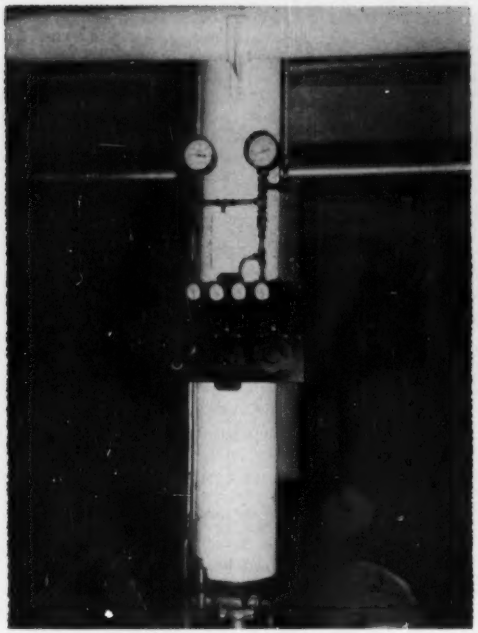
Four mills indicated good results with the constant-pressure, variable-speed type of control. Increased production and closer control of moisture content are given by the mills as advantages.

On lightweight goods, one mill has to reduce steam pressure because it found the slasher would otherwise run too fast.

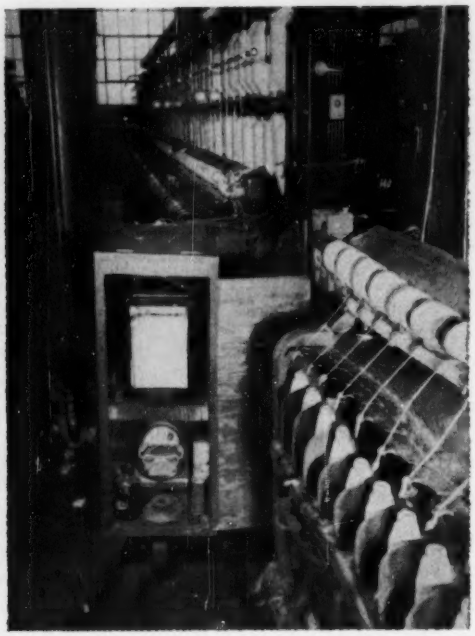
Buying Starch in Bulk

None of the mills in the group has had any experience with buying starch by the carload. The danger of explosion is not a consideration, however, because only dextrines might give trouble. The group generally felt that the convenience of the bags for

(Continued on page 232)



CHECK TEMPERATURE controls. You may have to run temperatures a little warmer in summer, a little cooler in winter—wherever processing will permit.



CHECK MOTORS FREQUENTLY for overload conditions or other power-consuming items that can be corrected. Spinning frames, in particular, should be watched carefully.

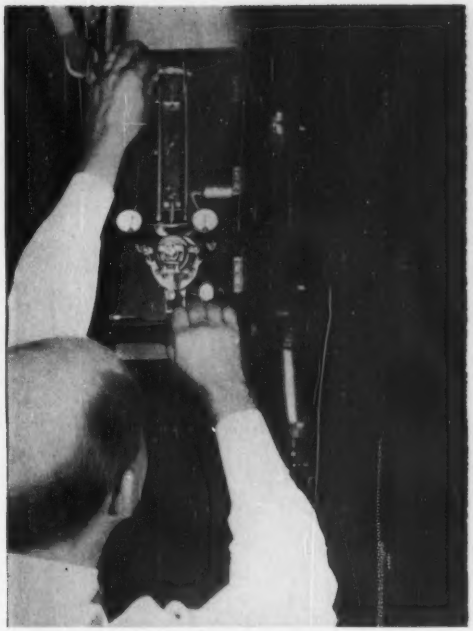
IF a Power Shortage Hits . . .

. . . THE SOUTHEAST, where there is such a concentration of textile mills, may have to go on emergency schedules. Rainfall can prevent it, but the specter of power shortage will remain over the Carolinas, Georgia, Alabama, and Tennessee for two or three years yet—until enough new generating capacity is added to take care of the South's fast-expanding industrial capacity.

This month, the experts say, is the critical month. If mills don't have to curtail or stagger schedules in December, they're relatively safe until spring, when air-conditioning builds up the next peak demand.

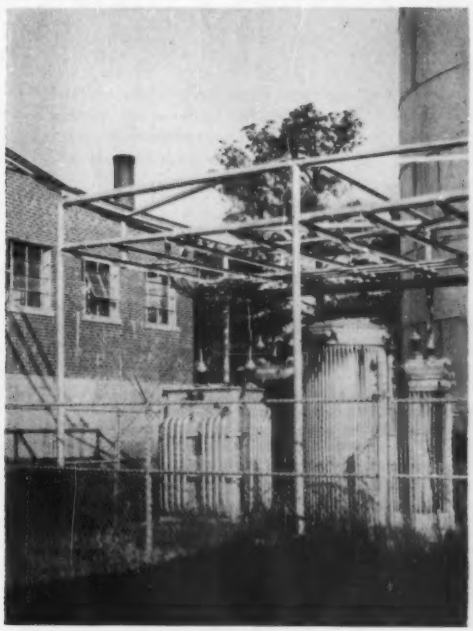
If a shortage does hit, mills will be told what to do about it. Pictures on these pages show some of the things you can expect, or that you can do now to conserve power and avoid governmental regulation.

OVERLOADED MOTORS and circuits can lead to serious trouble and excess use of electric power. All motors should be periodically inspected and tested for overloading with a hook-on tester.

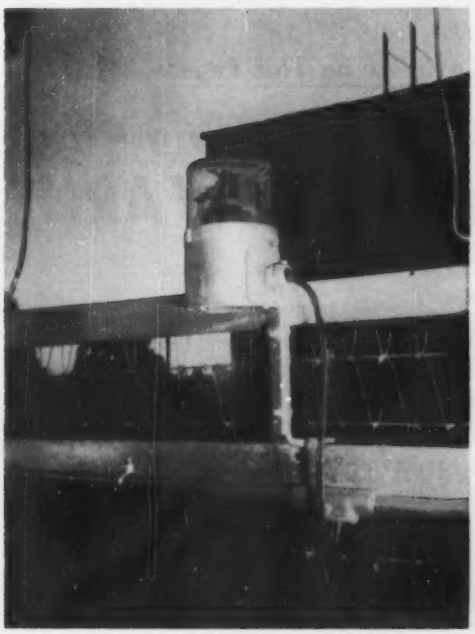


ADJUST HUMIDITY accurately. A small error in this setting can waste a lot of power. Actuating elements are very sensitive and do not require leeway for sluggishness.

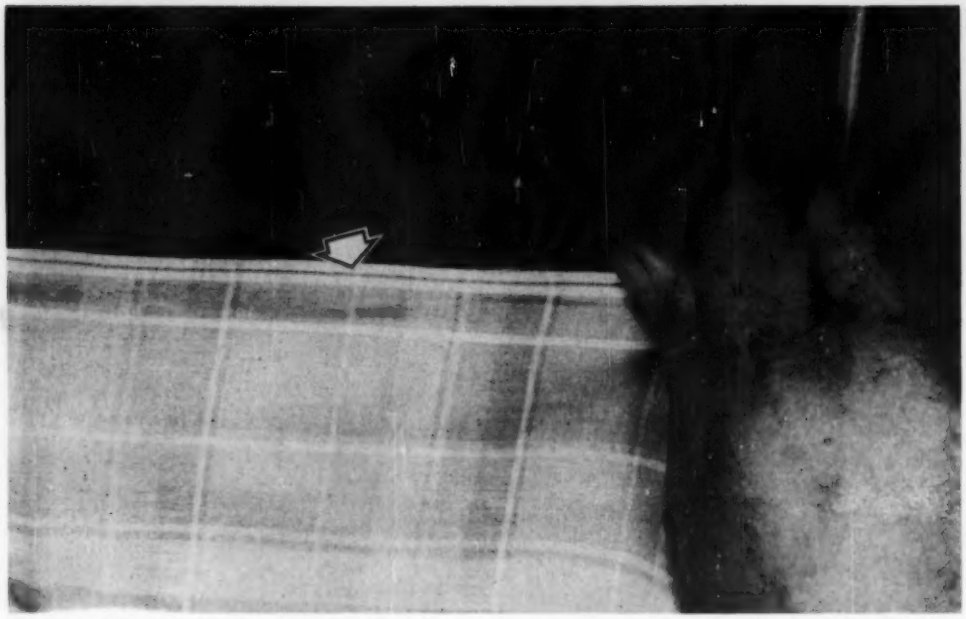
A SUBSTANTIAL SAVING in power can be effected by having each row or section of production machinery on individual circuits so that power can be shut off when these are out of production.



ADEQUATE TRANSFORMER CAPACITY to insure proper voltage is one way to save power. This, together with electric-system protective devices gives a better load factor and a cheaper electric rate too.



THE ELECTRIC EYE that turns on outside lights automatically can be disconnected. Security lights should be turned on in an emergency, but not convenience lighting or display lighting.



SELVAGE MARKER on this fabric is made from odd lots of yarn of a color that had been discontinued. In addition to using up odd lots, the marker serves as an identification for the fabric after it is finished and sold. A record is kept on the order form of the color of marker used in each slashing.

Complete on This Page:

Fancy-Weaving Plant Uses ODD YARNS in Selvage

▶ You don't need to "give away" your odd yarns. We use practically all of our small lots of varying sizes and colors as selvage markers. It pays off in several ways. Here's how —

By HENRY E. GOFORTH
General Foreman, Seaboard Mills, U. S. Rubber Co.

A FANCY-GOODS MILL can throw away profits if it sells its left-over yarns of a color that has been discontinued. Usually these yarns bring only a fraction of the cost put into them, and the records you have to keep on them take up valuable time.

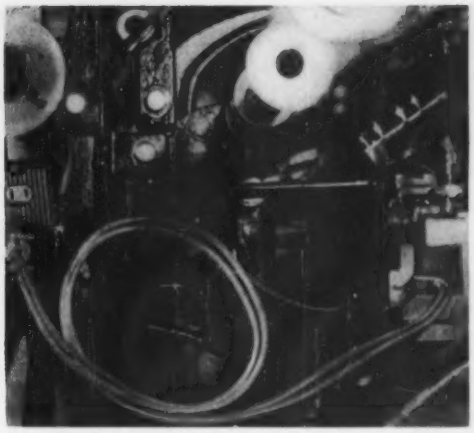
We try to keep these yarns down to an absolute minimum by close coordination between the mill and the styling department. We at the mill point out whenever a new color or yarn is added for one pattern or order so that the styling department can try to use it in an economical volume.

In addition, we make stock lists periodically to note how much each color is used during a season.

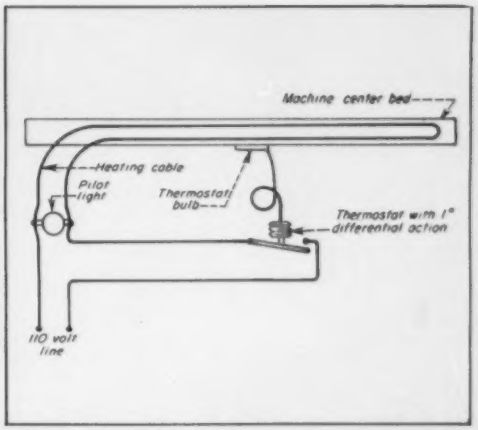
In spite of our precautions, we always have small lots of varying amounts and colors. We use up practically all of these odd lots of yarn as selvage markers.

We note on each order the yarn that was used as the selvage marker in that slashing. Thus, we have a permanent record of the time the fabric was slashed and woven and on what looms. If we have any difficulties, we can more easily determine the cause of trouble and prevent its recurrence.

A fancy-weave mill should try to keep odd yarns to be sold down to 1%, including off-quality yarns. Your profits may suffer if the odd lots are above this percentage. Cost estimates should make special provision by patterns if too much odd yarn is expected.



THE HEATING CABLE is plugged into a 110-v. line at one end of the machine and is pulled the entire length of the machine with an electrician's fishtape. The cable runs between the jack heads and the center bed in hairpin shape. After you set the thermostat to the temperature you require, 92, 93, or 94° F., for example, you can forget all about it.



THE HEATING UNIT consists of a special heating cable, a thermostat with a reading of one degree plus or minus, and a red light bulb. The entire unit costs about $40. The unit operates for about 5¢ per 8 hr. when it is on. The red light goes on when the heating unit is operating, and it goes off when the center bed has reached the correct degree of heat.

How to Get Good Start-ups on 60-Gauge FULL-FASHIONED Machines

► **Friction causes the center beds to heat up to about 94° F. when the machines are running. When they are stopped for an hour or more, the center-bed temperature drops to room temperature. When you start up again, the machines will not run well until the center-bar temperature rises again.**

► **The author has installed heating cables under the center bars of his machines to keep the temperature constant. He has eliminated start-up troubles.**

By H. B. LeFEAUX

Consulting Editor, TEXTILE WORLD; Superintendent, Vanette Hosiery Mills

FINE-GAUGE full-fashioned machines give some trouble at starting-up time in most mills. The reason for the trouble is that the tolerances between the picot points and sinkers and between the dividers and knock-over bits are so limited.

The parts in the machine are subject to expansion and contraction when temperature changes take place; and for that reason, the machine doesn't operate well until the parts are brought up to a normal operating temperature.

In a room that has a temperature of 81° F., the center bed reaches a temperature of about 94° F. when the machine is running. When the machine is stopped for an hour or more, the center-bed temperature drops to room temperature. Therefore, when the machine is started up again, it will not run well because of the contraction of the parts when they cooled off.

We have solved this problem by keeping the temperature of the center bed constant. We have installed a heating cable between the jack heads and center bed that keeps the temperature of the center bed at 94° F. A thermostat, with a one-degree plus or minus reading, automatically controls the temperature.

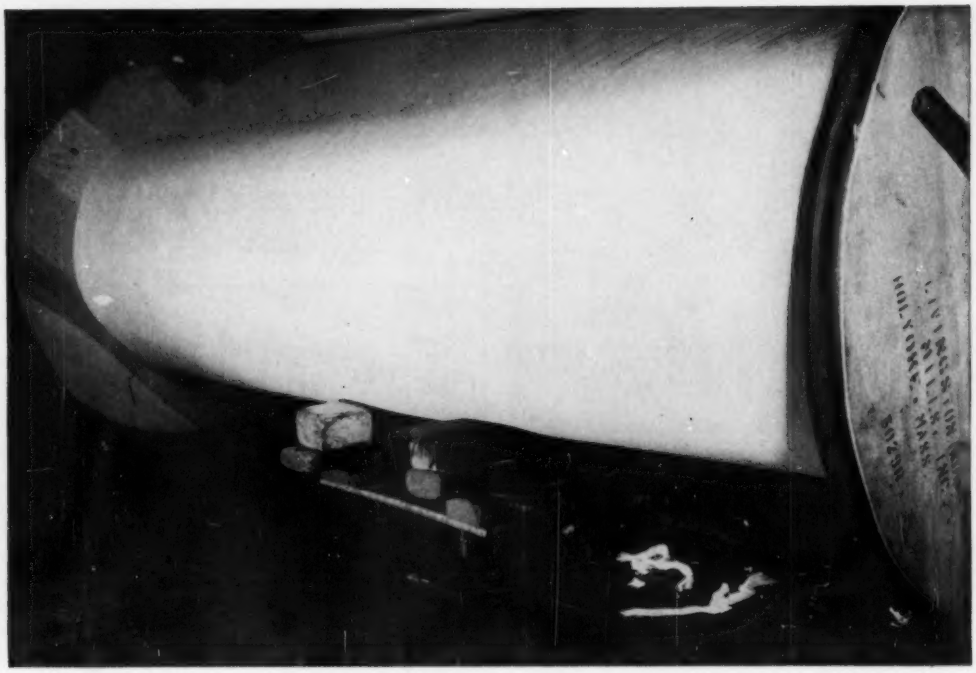
When the machine is running and the center-bed temperature is normal, (94° F.), the thermostat keeps the heat turned off. When the machine is stopped and the center-bed temperature begins to drop, the thermostat turns on the heating unit until the 94° F. temperature is reached. A red signal light indicates when the heat is on.

We use the heating unit on our 60-gauge Reading and Kalio machines. It can work equally well on 51-gauge machines.

An electrician can install the complete unit in 5 hr. That time includes running the heating cable from one end of the machine to the other in the form of a hairpin between the jack heads and the center bed.

The heating cable should be cut to 110 ft. for a 30-section Reading machine and to 116 ft. for a 32-section Kalio machine. The heating cable is adapted for use on 220 or 110 v. We recommend that you use 110 v.

We will be glad to furnish any interested readers with further information on the unit.



POWER JACK at slasher lifts completed warps high enough to be engaged by overhead conveyor. No strained muscles here!

HANDLING— Ten Ways Better at . . .

THE LIVINGSTON WORSTED MILLS, Inc.

MILLS AND EXECUTIVE OFFICES, HOLYOKE, MASS.

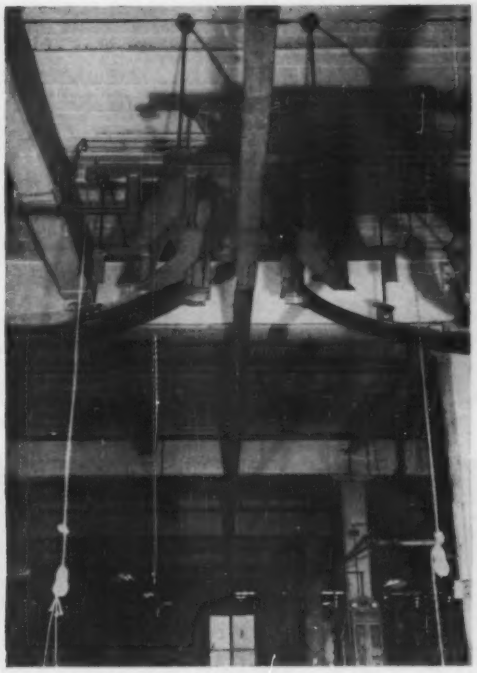
- Better loom layout made possible by overhead monorail
- Warp-changing time cut 75%
- One handling completely eliminated in dyehouse
- Improved cloth truck holds twice as much

By **JAMES H. KENNEDY,** Southern Editor, TEXTILE WORLD

DO YOU HAVE any handling problems? Livingston Worsted had plenty of them. But now this mill is a model of efficiency. Let's see what problems they had and how they were solved.

We'll start with completed top and hit some of the highlights as we travel through the mill.

BALLED TOPS are stored in cardboard boxes—24 to a box. Pallets were made from scrap lumber.



LOOK UP AT THE CEILING at Livingston Worsted. A network of rails joins slashing, drawing-in, and weaving.

Top Storage

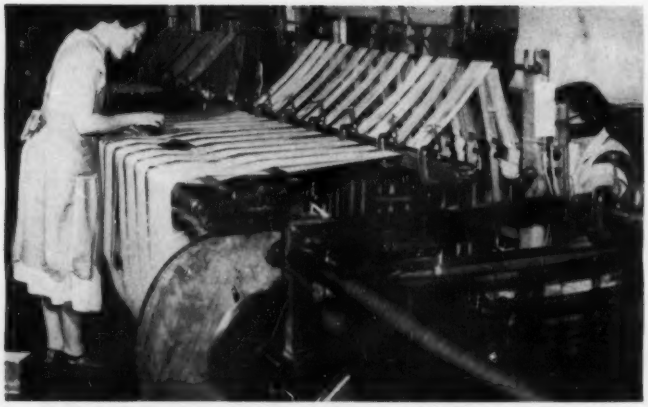
Problem: Store tops, keep them clean, have accurate records.

Solution: "We decided to use cardboard boxes that hold 24 tops. Why 24? Well, our dye lots are in multiples of 12, usually six or eight dozen. So we just have to take three or four boxes of top when we start a new lot."

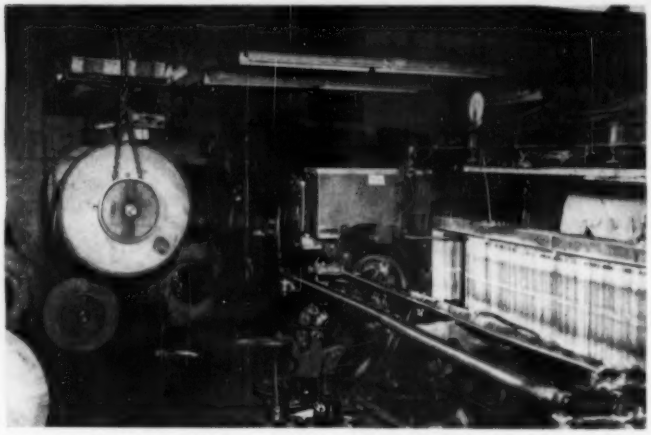
TW comment: Boxes of top are stored five high with a pallet truck at Livingston. Each box is ticketed with case number, weight, and date. Duplicate tags are sent to the main office and to the Top Dept. stores file.

Yankee ingenuity prompted the mill to use the lumber it had scrapped from old storage bins to make the pallets.

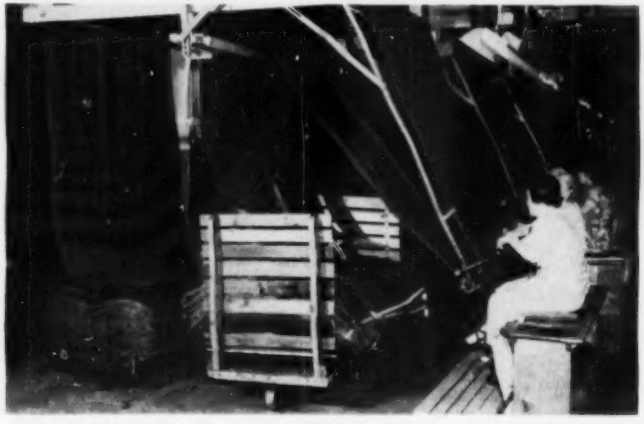
IN THE DYEHOUSE, palletized tops are handled with an electric lift truck. There's no intermediate handling from the dye kettles to backwashing.



TWO IN ONE—special frame permits simultaneous drawing-in and drop-wire placing.



LOOM IS STOPPED 30 MIN. for a warp out now. Fixer and changer work as warp stands ready on monorail.



POWER-DRIVEN PERCHES take cloth from one truck and fold it onto another after perching.

Top Dyeing

Problem: Eliminate the handling of tops between dyeing and backwashing.

Solution: "We decided to put the dyed tops on a pallet—three dozen to a load. Then we put the load down right behind the backwasher and feed from the pallet. When one layer of tops is used up, we just tie in from the second layer. We used to put the tops on the floor—that turned out to be an unnecessary handling."

TW comment: Livingston has equipment for top, yarn, and piece dyeing. All of the machines are stainless steel.

Drawing-In

Problem: Make better use of the time required to draw in and to change over looms.

Solution: "We fixed up a special frame to hold the beam and harnesses. At the back we put a clamp to keep the warp tight. Then we could have the drop-wires put on during drawing-in without disturbing either operation."

TW comment: Another handling was eliminated here. And the mill has less mending to do now because every end has a drop-wire on it before the warp gets to the loom.

Completed warps are put on a special truck that keeps the ends straight and has holders for the harnesses and drop-wires. Trucks are then lined up, properly ticketed, in an area near the looms.

Weaving

Problem: Arrange the looms for the best layout, but don't redesign the mill.

Solution: "Our bays were just perfect for four looms—but that didn't leave enough space at the back of the looms. So we had Alfred B. King of New Haven, Conn., install a Cleveland Tramrail overhead-handling system. Now we take out the empty warp and bring in the new warp—all overhead."

TW comment: Livingston's looms are all 82-in., W-3, Crompton & Knowles. Warp-changing time used to be 2 or 3 hr. It now takes only 30 min. from

the time the loom stops to when it starts up again. A fixer helps the changer do the job.

The savings made here prompted Livingston to look around for other places where the overhead system could be used. The result? A network of rails that connect dressing, slashing, drawing-in, and weaving.

There's one rail for dressing that has a fork in it to send beams either to slashing or, if they're not to be sized, right over to drawing-in.

ALMOST TWICE AS MUCH cloth can be handled by the flat-top truck (left) as by the older, sided model, (right).

Finishing and Inspecting

Problem: Make the job at the decating machine easier.

Solution: "It used to take two men to lift off the roll of cloth. Now we've got a hoist and rail. One man does the job. And there's no danger of lifting strains."

Problem: Do something about tacking cost.

Solution: "An Uxbridge tacker helped us here. We used to have four men guide the cloth for tacking. Now one man, with a helper for fancy work, does the job."

Problem: Improve perching.

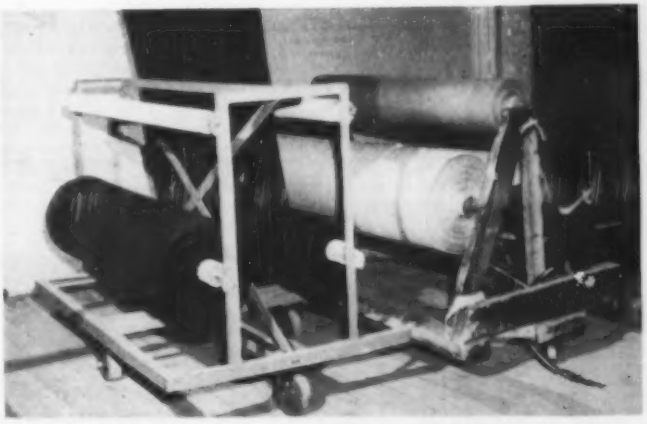
Solution: "We installed power-driven perches that the girls operate from the front. A clutch and gear reduction on the motor drive help here. The cloth is taken from one truck and automatically folded onto another after perching."

TW comment: They improved the cloth trucks too. The old ones had small sides on them that served no useful purpose. Cloth often fell or draped on the floor. Now, flat-topped trucks with no side boards keep the cloth aboard and hold almost twice as much to boot.

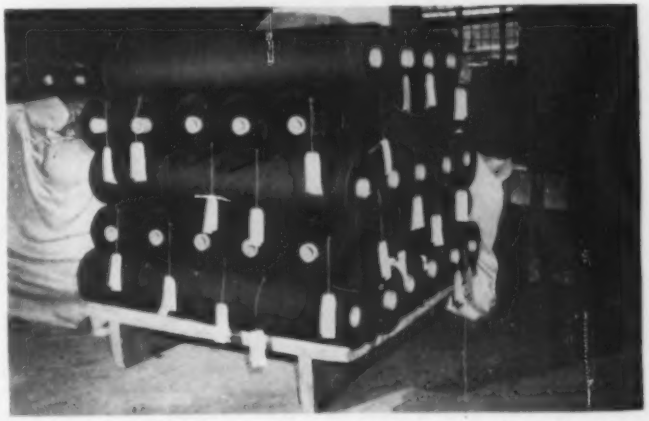
Problem: Eliminate constant rethreading of the measuring machine.

Solution: "We just don't untack the pieces until after measuring. We thread the machine now only once for every 12 or 16 pieces."

For the rest of this story . . . and the NEW MACHINERY angle at Livingston, turn to p. 246



FOUR ROLLS FOR THREE, steel for wood—all the older trucks are being replaced.



LEAF FROM QM BOOK is this method of handling and storing rolls or folded pieces.

We Cut YARN VARIATION By More Than 25%

► Adrian plant of American Yarn & Processing Co. got a 25% reduction in yarn-size variation by putting ball-bearing front rolls on its roving frames and making some other changes. A test of ball-bearing vs. shell rolls, described here, showed a 34% improvement.

By ED BLACKWOOD

Superintendent, Adrian and Madora Plants, American Yarn & Processing Co.

WE HAVE HAD ball-bearing top rolls on the front lines of our roving frames for over a year. Since we installed these rolls, the variation in our yarn size, by weight, has been consistently about 25% less than it was when we used shell rolls.

We cannot say that these antifriction rolls are entirely responsible for the improvement, but we do know that they are a major factor. When we installed the rolls, we also made other repairs. In addition, we experimented with roll settings to get the ones that gave us the best work.

Test Measured Improvement

After we put the antifriction rolls on, we knew that we were getting a definite improvement; and to see just how much it was, we ran a controlled test of the new antifriction rolls versus the old shell rolls. Here's the test—

1. We made 108 bobbins of roving on our slubbers equipped with Climax ball-bearing rolls. Then we took these rolls off, replaced them on all 108 spindles with shell rolls, and made another 108 bobbins. We numbered all of the bobbins so that we could tell what spindles they were made on.

2. We then made 54 bobbins of speeder roving from each set of slubber roving. The slubber roving made with Climax rolls was made into speeder roving with Climax rolls on the front line of the speeder.

The ball-bearing rolls on the speeder were replaced with shell rolls, and the slubber roving made with shell rolls was made into speeder roving with shell rolls on the front lines of the speeder.

In both cases, slubber bobbins 1 and 2 were creeled in to speeder spindle No. 1; 3 and 4 into No. 2; etc. The speeder bobbins were numbered and were creeled into the spinning frame in the same manner.

3. We made 27 bobbins of 100s yarn from each set of speeder roving. Again, "ball-bearing" roving was spun on a spinning frame with Climax front top rolls, and "shell" roving was spun with shell top rolls on the front line.

Good Results Obtained

Results of this test showed that yarn spun with ball-bearing rolls was 38.4% more uniform in size than that spun with the shell rolls. We didn't believe the first test so repeated it. The next time, we got a 34% improvement. We were then convinced the method was accurate.

Of course, variation improvement is not this great in normal production, but it is enough to make us very glad that we have antifriction rolls. As I pointed out before, we get an average variation in size of about 25% less than we used to have.

Our variation, by weight, usually runs from 3.2% to 9% on our 100s yarn. It averages about 5%.

The strength of our yarn has been improved considerably, and we have fewer ends down. Our yarn is cleaner because we do not need to lubricate the antifriction rolls, and black oil does not get in the yarn.

One of our customers is a glove manufacturer who makes among the finest gloves in America. He uses 100/1 yarn. He told us that for his purposes the yarn is now running 100% better and that its quality has been improved noticeably also.

As a result of our tests, we have equipped all our frames with ball-bearing rolls. Other plants in our organization are putting in antifriction rolls on the basis of our experience.

ANTIFRICTION BALL-BEARING FRONT ROLLS on both roving and spinning frames in the author's mill have given fewer ends down and increased yarn strength.

ACTION OF SOME CHEMICALS ON DYNEL

Noted here are the effects on visual appearance, shrinkage, and deterioration of 100% Dynel fabrics in 20 hours immersion in certain chemicals. Tests were conducted by the Better Fabrics Testing Bureau, Inc., New York.

	Concentration (per cent)	Temperature °C	Appearances and Effect of Reagent	Per cent Shrinkage		Per cent Loss in Strength	
				Warp	Filling	Warp	Filling
ACIDS							
Sulfuric	70	50	No effect	0	0	9	0
Hydrochloric	33	50	No effect	0	0	0	0
Hydrofluoric	50	Room	No effect	0	0	0	0
Nitric	40	50	No effect	0	0	0	0
BASES							
Sodium hydroxide	20	50	No effect	0	0	5	7
Ammonium hydroxide	28	Room	No effect	0	0	0	0
OXIDIZING AGENTS							
Hydrogen peroxide	30	Room	Slight bleaching	0	0	5	0
Sodium hypochlorite	Commercial	50	No effect	0	0	0	0
SOLVENTS							
Ethyl alcohol	100	50	No effect	0	0	0	0
Perchlorethylene	100	50	No effect	0	0	0	0
Deodorized kerosene	100	50	No effect	0	0	0	0
Toluene	100	50	No effect	0	0	0	0

DYNEL Shows High Resistance To Chemicals in Tests

► Better Fabrics Testing Bureau dunked dynel in 80 chemical solutions for 20 hr. at a wide range of temperatures. Here are the results—

HIGH RESISTANCE to a wide variety of acids, alkalis, salts, amines, and bleaches was shown by 100% dynel fabrics tested recently by Better Fabrics Testing Bureau, Inc., New York, N. Y. Dynel is the man-made acrylic staple fiber developed by Union Carbide and Carbon Corp.

Undyed dynel was immersed for 20 hr. in 80 chemical solutions to test the effect on the fiber's visual appearance, shrinkage, and loss of strength. Temperatures of the tests varied from room temperature to boiling.

In most of the corrosive solutions tested, the dynel was either completely unharmed or marred only by slight discoloration. There was negligible loss of strength and no shrinkage.

No changes of any kind occurred to the dynel, it is reported, in solutions of most organic and inorganic acids, alkalis, inorganic salts, bleaching agents, or in miscellaneous organic chemical reagents, in the various concentrations and at temperatures of 50° C. or under.

Sodium-hypochlorite bleach in a commercial household (5.25%) solution at 50° C. had no damaging effect on the dynel, indicating that properly finished dynel clothing, blankets, and similar products can safely be bleached or disinfected in the home or in commercial launderies.

Dynel was unaffected in a boiling sulfuric acid concentration of 5%. At the lower temperature of 50° C., in stronger sulfuric-acid solutions, the fabric lost some strength (no higher than 10%), but did not shrink even in concentrations up to 70%. In boiling 25% sulfuric acid, the fabric was stained brown, and lost 12% of its strength in the 20-hr. test.

A 38% concentration (the strongest available commercially) of hydrochloric acid at 50° C. did not harm the fabric. In boiling hydrochloric acid, the dynel was stained brown, shrank about 5%, and lost 10 to 12% of its strength.

At 50° C., in formaldehyde, the only effect on dynel after 20 hr. immersion was a slight yellow staining. At the same temperature, the fabric was unharmed by such chemicals as nitric acid, formic acid, oxalic acid in ethanol, benzene sulfonic acid, sodium hydroxide, ammonium hydroxide, ethylene diamine, hexamethylenediamine, pyridine, acetamide, diethyl ether, and urea. Solvents that did not affect dynel also included ethyl alcohol, perchlorethylene, deodorized kerosene, and toluene—the usual cleaning and spotting agents.

DAILY WASTE WEIGHINGS

Dept. Carding Week ending March 31, 1951

Kind of waste Reworkable (total)

	Shift 1	Shift 2	Shift 3	Daily total	Production	Percent waste	Standard percent
Mon.	772	754	688	2,214			
Tues.	689	786	744	2,219			
Wed.	841	797	709	2,347			
Thur.	756	705	692	2,153			
Fri.	811	790	704	2,305			
Sat.	—	—	—	—			
Weekly totals							
Shift 1	3,869				52,320	7.4	7.00
Shift 2		3,832			50,496	7.6	7.00
Shift 3			3,537		44,800	7.9	7.00
Grand total				11,238	147,616	7.6	7.00

WASTE STANDARDS

(Mid. 1-in. cotton)

Process Waste	
Opener-feeder waste	0.10%
Vertical opener	0.50
Buckley opener	1.00
Pickers (total)	2.00
Card cylinder and doff strips	0.70
Flat strips	2.75
Lickerin waste	1.25
Fly	0.25
Total	8.55%
Reworkable waste	
Rejected laps and pieces	3.00
Card-lap waste	1150
Card-front waste	0.25
Drawing sliver	0·74
Slubber sliver	1.25
Roving waste	0.25
Total	7.00%

If Card-Room **WASTE** *Is Too High . . .*

. . . You can reduce it by a well-run waste-control program that includes:

- Setting standards for maximum waste
- Weighing and recording all waste daily
- Charting the waste score card weekly

By **E. H. HELLIWELL**, New England Editor, TEXTILE WORLD

EXCESSIVE WASTE in one large cotton mill was found to result from improper supervision. Maximum waste standards for each kind of waste were then established. However, the supervisors were not sufficiently impressed with the importance of these standards.

Complaints from top management of excessive waste brought serious efforts from department supervisors to reduce waste. Some of these efforts achieved a temporary reduction in waste; but when pressure from topside eased, waste climbed back to the former high figures.

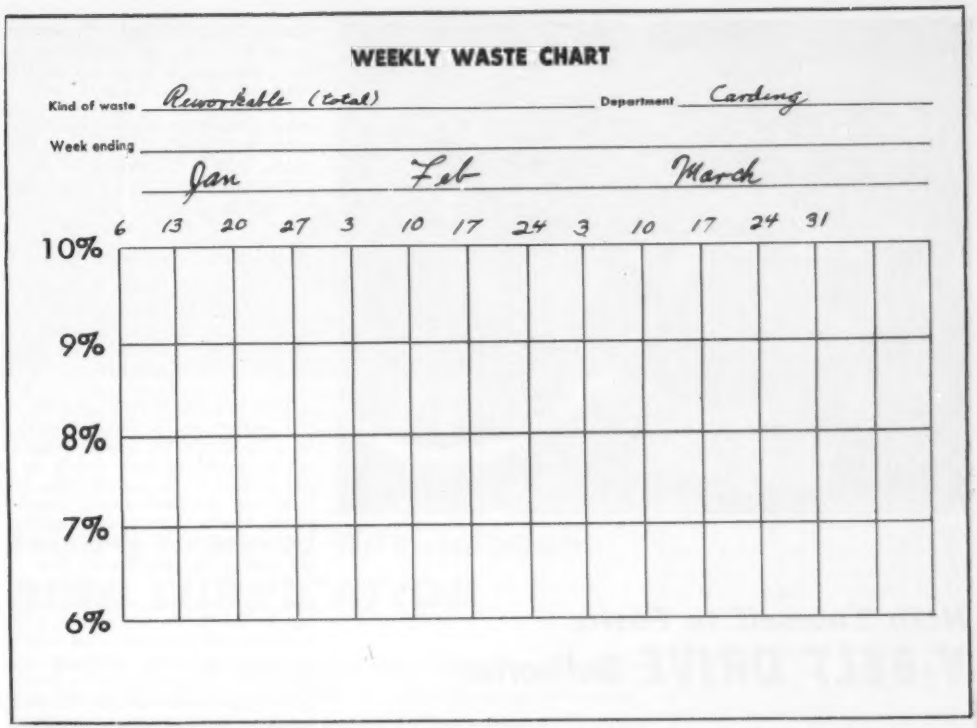
It was found that with suitable waste records, proper instructions, and a faithful follow-up, control of waste could be maintained close to the established standards.

STEP 1

A thorough analysis of the entire waste situation was made by a competent group. The findings were passed along in brief form to the department heads and supervisors. The analysis divided all waste into three general divisions: process waste, reworkable waste, and excessive waste.

Process waste was defined as waste intentionally removed to improve the quality of the product.

Reworkable waste was described as good stock unavoidably removed in the process.



THE WASTE SCORE CARD, with weekly totals charted by shifts, is posted for all supervisors and operators to see. Similar charts are used for other types of waste.

All other waste was classed as excessive. Its removal did not improve the quality of the product and was not necessary in the proper operation of the process. Excessive waste could be either process or reworkable waste.

STEP 2

The reasons for the need of constant waste control were listed. It was pointed out that the value of good stock removed increases with the processes performed on it. On reworkable waste, this additional cost represents a labor-cost loss on each process up to the point of removal. Excessive reworkable waste added to regular stock means poor-running work on all processes. Poor-running work results in increased end-breakage, more piecings and work for the machine tenders, lower production, poorer yarn appearance, and lower yarn strength.

Good stock in process waste involves a direct money loss in the difference in price that can be received for the waste and the original cost of the cotton.

STEP 3

The main apparent causes for excessive waste were determined as: carelessness in creeling cards, drawing and roving frames; carelessness in the separation of good waste from other waste; ignorance of the correct amount of waste needed to be removed; rough doffing, handling, and storing of roving; incorrect machine settings; and an occasional poor lot of cotton.

A summary of these causes shows that a large part is due to personnel faults. The correction of these faults is the responsibility of the department head. Process waste proved less of a problem than reworkable waste, as is usual in most card rooms. The workers' attitude towards reworkable waste is that the stock is not lost or damaged; it only has to be returned to the picker for reworking.

STEP 4

These measures were suggested for reducing and controlling waste:

Check established waste standards to determine if they are suitable for the stock and type of work to be done.

Make sure that all supervisors understand the waste standards and their application to waste control.

Have supervisors explain the importance of waste control to the operators and the best methods to keep waste at a minimum.

Weigh and record daily weights of all types of process and reworkable waste on each shift separately.

Compare weekly percentages of all types of waste with standards.

Compare waste percentages on each shift with other shifts.

Post a score card of important waste percentages for all employees to see.

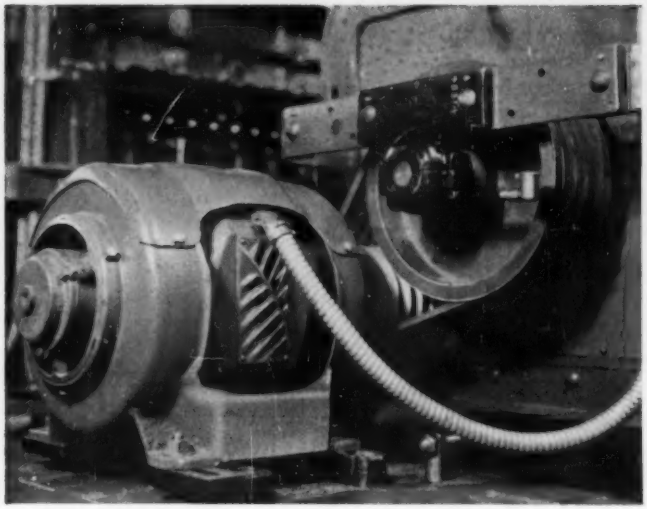
Have supervisors make regular checks on all waste made and see that it is properly separated and classified.

Have all settings checked on machines making excessive waste.

Spread the feeding of each day's reworkable waste equally over the whole day's production.

Coach all new employees on the waste-control program.

Have all supervisors and employees give special attention to reworkable waste.



Help Yourself to Faster V-BELT DRIVE Deliveries

Here are some good tips on how to get V-belt drives when you need them during these times when manufacturers may be tied up with defense work or short of materials.

By J. H. SNARTEMO, Application Engineer
Texrope Drive Dept., Allis-Chalmers Mfg. Co.

Mill Mobilization Manual

THE TEXTILE INDUSTRY is again faced with the problem of obtaining reasonable deliveries on all types of equipment necessary to keep pace with expanding production requirements.

For this purpose, or for any one of a thousands reasons, you may desperately require a V-belt drive in the shortest possible time. When and if such circumstances arise, consideration of the factors outlined here may be richly rewarding:

Order From Stock Sizes

Generally speaking, anything about a V-belt sheave that departs from stock specifications adds materially to delivery time.

The order of a special keyseat, for instance, may entail a reboring operation as well as a setup on the keyseater. These operations usually require additional paperwork and a wait for machine capacity. Frequently, a simple offset key would eliminate the need for the special keyseat.

While the fundamental principles of good V-belt engineering are not particularly involved, time- and money-saving approaches can often be suggested by the V-belt sales engineer serving your territory. He is thoroughly familiar with stocks available and, because of his day-to-day experience with transmission problems, can give you the most for your drive dollar.

Stock sizes of V-belt sheaves are pretty well standardized and can be summarized as follows:

V-Belt Size	Range in Pitch Dia.	Range in No. of Grooves
"A" (1/2 x 11/32)	2.6 to 18.0 in.	1 to 6
"B" (21/32 x 7/16)	4.6 to 38.0 in.	1 to 10
"C" (7/8 x 17/32)	9.0 to 50.0 in.	3 to 10
"D" (1-1/4 x 3/4)	13.0 to 48.0 in.	5 to 12

These stock sizes cover the great majority of all V-belt drive applications to the extent that both sheaves of the drive can be furnished from stock. However, it is not unusual for competent engineers to work up specifications calling for perfectly good drives employing non-stock sheave diameters when, by applying the sheave ratio to the stock sizes available, equally good drives could be taken off the supplier's shelf.

Smaller Sheaves Can Be Delivered Sooner

If the required driven speed of a drive is such that it cannot be obtained by any good combination of two stock size sheaves, select the larger sheave from stock and have the smaller one made to order. This method will usually result in both a cash saving and a faster delivery, since frequently the smaller sheaves can be machined from casting carried in stock by the manufacturer. In such cases, the time saved is considerable because present-day foundry loads are heavy, and deliveries of special castings are consequently slow.

Practically all stock-size sheaves are equipped with removable bushings having definite bore limits — both minimum and maximum—that should be considered when specifying the drive. As an example, a five-groove drive might be adequate for the load but call for bushings having maximum bores less than those required. Adding a groove to the drive might be all that would be necessary to obtain stock sheaves with bushings suitable for the bores specified. In all probability, the six-groove stock drive would cost less than a five-groove drive with special sheaves and, in addition, provide better service and longer belt life because of its larger capacity.

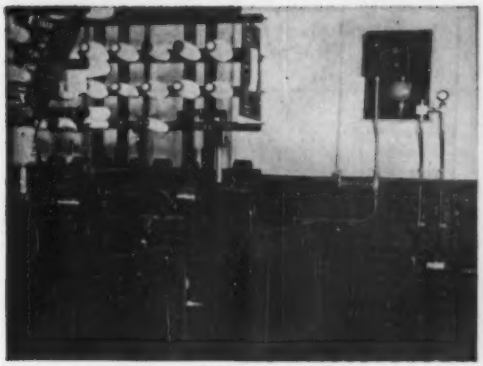
Make Use of Tapered Bushings

Although stock V-belt sheaves were originally designed to accommodate flange-type straight-bore interchangeable bushings solely for inventory reasons (making possible smaller and more flexible stocks), progressive engineering has developed highly efficient taper-type clamping-action bushings that greatly facilitate installation and removal of sheaves so equipped. These bushings are furnished with almost all stock-size sheaves at no extra cost and should be a strong incentive for the use of stock sheaves whenever and wherever possible.

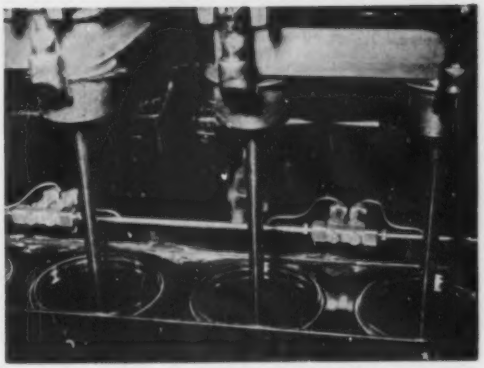
Consider High-Capacity Belts

A comparatively new factor in V-belt drive engineering is the high-capacity or super-rated belt offered by leading manufacturers. These belts are credited with a capacity of 1.4

(*Continued on page 232*)



TWISTER RINGS ARE LUBRICATED automatically through a centralized system. The time clock on the wall, right, automatically pumps oil from a 55-gal. drum to metering injectors on the ring every 20 min.



PREFABRICATED VALVES, TUBES, AND INJECTORS were mounted on the ring rail. Plain, grooved, or wick-type rings were connected to the new system.

Twisting Improved With Automatic RING LUBRICATION

HIGHLIGHTS: Oil-stained yarn prevented and ring-oiling labor eliminated with centralized ring-oiling system—Uniform, measured amount of lubricant applied at regular intervals increases traveler life and reduces ring wear—Higher spindle speeds and greater production obtained with better quality product at lower cost.

CENTRALIZED LUBRICATION of its twister rings has solved the problems of manual lubrication at the Textile Products Div. plant of Owens-Corning Fiberglas Corp., Ashton, R. I. With manual ring-oiling methods, over-lubrication caused oil spots on yarn, and under-lubrication caused short traveler life. The nature of the material and the diversity of the yarn sizes produced in this plant made a satisfactory solution much more difficult.

Tests made on the twister frames indicated that some type of controlled application was required whereby a small measured amount of lubricant could be applied at frequent intervals to give efficient lubrication of the rings. Proper, positive pressure was found necessary to insure that the lubricant reached the rings and travelers. Application of excessive lubrication had to be avoided to prevent oil or grease stains on the twisted yarn.

As a result of this twister-ring lubrication survey, three 200-spindle Saco-Lowell 4-in. ring twisters were equipped with a Lincoln Centro-Matic oiling system for the rings. This automatic system consists of an electrically operated lubricant pump that supplies the oil lubricant directly from the original 55-gal. container to the dual metering injectors on the ring rail. Each injector is connected to a ring with a bent tube. Injectors are operated by a positive-displacement pump. These injectors can be easily adjusted so that each ring receives a uniform, measured amount of lubricant on each cycle.

An automatic time clock attached to the electrically driven pump is adjustable for setting the time interval between lubrication cycles. The frequency interval is set manually on the time clock and may be made to vary from 1 min. to 1 hr. or more. The time clock on these frames was set at 20 min. as this time-cycle was found suitable for the type of work being run at the time.

These frames have been running since November, 1950, and a report from the mill management covering 6 mo. experience on various sizes and types of Fiberglas yarn credits many advantages of automatic ring lubrication over the previous method of manual lubrication. The results have been so gratifying at the Ashton plant that the management plans to equip the present and anticipated new plant completely with this type of ring lubrication.

Advantages reported from the use of automatic centralized lubrication on twister rings

- All labor on ring-oiling eliminated
- Oil consumption greatly reduced
- Traveler life increased five times
- Spindle speed increased an average of 8.5% on 11 yarns
- Spindle speed increased on fine yarns from 20 to 40%
- Production increased on all yarns
- All oil-stained yarn prevented
- Improved, more uniform yarn tension
- No dry rings or burnt travelers
- Reduced wear on rings and lower power consumption
- Less down-time for traveler changing, groove cleaning, and re-wicking
- Former oiling frequency: an uncertain amount every 4 hr.
- Present system: uniform, measured amount every 20 min.
- Positive pressure in oil line insures that lubricant gets to the ring and traveler

Over-all Hosiery-Production Indexes
(1939=100)

	1940	1945	1950
TOTAL HOSIERY			
Production total	94.9	87.0	109.4
Production workers	91.1	62.9	76.5
Man hours expended	87.1	66.2	79.2
FULL FASHIONED			
Production total	95.3	78.5	116.1
Production workers	90.7	50.6	66.6
Man hours expended	n.a.*	54.6	71.3
SEAMLESS			
Production total	94.4	96.7	102.9
Production workers	91.9	80.4	90.6
Man hours expended	n.a.	82.4	90.3

* not available

How Hosiery-Production Efficiency Has Been Improved
(1939=100)

	1940	1945	1950
FULL FASHIONED			
Man hours per unit output	n.a.*	69.6	61.4
Prod'n workers per unit output	95.2	64.5	57.4
Output per man hour	n.a.	143.8	162.8
Output per production worker	105.5	155.1	174.3
SEAMLESS			
Man hours per unit output	n.a.	85.2	87.8
Prod'n workers per unit output	97.4	83.1	88.0
Output per man hour	n.a.	117.4	114.0
Output per production worker	102.7	120.3	113.6

* not available

Improved Machines Reduce *HOSIERY MAN-HOUR Requirements*

• A U. S. Dept. of Labor study of productivity among hosiery manufacturers shows that the number of man hours needed to produce a dozen pairs of hosiery has been reduced since 1931.

• Increased total output has been obtained at only a small increase in the total of man hours expended.

By **HERBERT R. TACKER,** Bureau of Labor Statistics, U. S. Dept. of Labor

DURING 1950, both full-fashioned and seamless hosiery manufacturers reducted the number of man-hours required to produce a dozen pairs of hose, according to Report No. LS-52-1276 of the U. S. Dept. of Labor's Bureau of Labor Statistics. The two industries combined showed a reduction of about 8% from 1949 and about 28% from 1939.

As for production, it reached an all-time high in the full-fashioned field, and showed an increase in the seamless field for the first time since 1946. The increases in output were accomplished with only a small increase in the total number of man hours expended in each industry.

Full-Fashioned Hosiery

In 1950, man-hours expended per unit of full-fashioned hosiery were lower than in any previous year since 1939. Although production was more than 16% greater than in 1939, it was attained with 28% fewer man-hours.

From 1939 until 1945, man-hour expenditures per unit of production had declined 30%. The favorable trend was interrupted following the close of the war, and unit man-hours increased 16% between 1945 and 1947. During the years 1947-50, however, the trend was resumed; unit man-hours dropped 24%.

The principal factor affecting unit man-hours during the latter period has been the installation of new and improved knitting machinery. The installation of machinery of higher gauge, more sections, and greater speed is a continuation of a long-term trend, interrupted only by World War II. During the war, new machinery could not be obtained, and the large backlog of orders for the new machines was not fully met until 1949.

In recent years, the demand for sheer stockings has increased greatly. As a result, the average denier of full-fashioned hose has decreased. In addition, over 98% of full-fashioned hosiery production since 1948 has been "all-nylon," replacing the predominantly rayon output of war-time and the silk of pre-war years.

Neither the decrease in average denier nor the replacement of silk and rayon with nylon has affected unit man-hours appreciably, however. Nylon is more easily knitted, but the advantage gained in knitting is in part

(Continued on page 236)

Man Hours vs. Physical Output

▶ **Man hours per unit of output is a measure of the relationship between labor time spent and production in physical units.**

Changes over the years in the ratio between man hours of work and physical output show the joint effect of a large number of separated, though interrelated, influences. These latter include technological improvements, rate of operations, relative efficiencies, the flow of materials, skill and effort of the labor force, management efficiency, and the state of the company's employee-employer relations.

NEWEST OF THE NEW FIBERS shown at the exhibit, and shown for the first time publicly, was Acrilan, acrylic fiber produced by Chemstrand Corp., Decatur, Ala. Men's suits and piece goods were among the fabrics shown.

LATEST MODEL FLAMMABILITY TESTER shown has a removable specimen holder that has no specimen-support wires.

NEWER SYNTHETICS Dominate AATCC Convention Exhibit

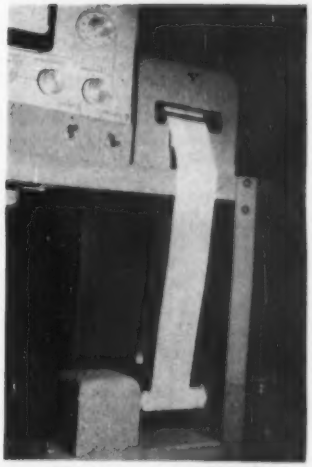


CHART-TAKEUP DRIVE for use with the Brush evenness tester was shown by Brush Development Co., 3405 Perkins Ave., Cleveland, 19, Ohio. Drive holds charts in convenient form; two units can be used for easy studying of curves charted.

- **Almost all dyestuff and chemical manufacturers introduce new products and techniques for handling non-cellulosic fibers.**
- **New instruments widen range of testing and speed up time required.**
- **Improvements in finishes aim at speedy processing, more durable results.**

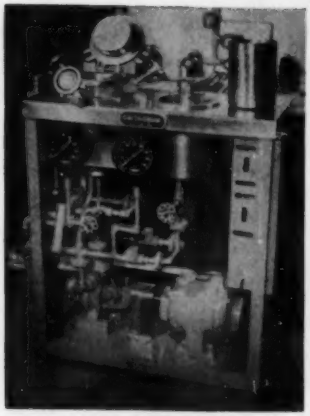
VISIBLE EVIDENCE that the problems of dyeing the newer synthetic fibers are under severe attack and that considerable success has already been attained was dominant in the exhibits at the recent AATCC annual convention in New York. Practically every display booth showed new dyes, new dyeing processes, or new chemicals for processing Acrilan, Dacron, dynel, Orlon, Vicara, and nylon. New fabrics for expanded usage of rayon and acetate, and a wide range of mixed-fiber fabrics were also shown.

Practically every dyestuff company displayed a wide range of dyes, including dark shades, for dyeing the newer fibers, as well as new techniques for applying these dyes. General Dyestuff Corp., E. I. du Pont de Nemours & Co., and Sandoz Chemical Works distributed useful booklets summarizing what each company had to offer in dyes and dyeing techniques for the newer synthetics.

Shown on these pages are the new-product highlights of the show.

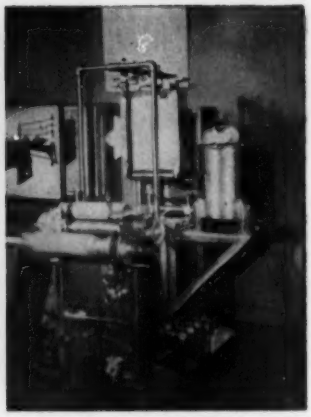
▶ A new low-cost P45 polarizing microscope with a built-in light source for the analysis of fibers and chemicals was on display at the booth of American Optical Co., Instrument Div., Eggert and Sugar Roads, Buffalo 15, N. Y.

▶ The use of pigment padding colors on the new synthetic fibers was shown by Interchemical Corp., Textile Colors Div., Hawthorne, N. J. One interesting use shown was a pigment white on Orlon continuous-filament fabric.



LABORATORY - MODEL HIGH - TEMPERATURE PACKAGE-DYEING MACHINE, capable of circulation temperatures up to 300° F., was on display at the booth of Smith, Drum & Co., 432 West Allegheny Ave., Philadelphia 33, Pa. The steam-operated unit is 18 in. deep, 30 in. wide, and 36 in. high. It can take a 1½-lb. package on either a tube or spring, and has a raw-stock dyeing cage also. Made of stainless steel throughout, the unit, powered through a 1-hp. motor, has automatic reversing of liquor flow and a pressure safety valve.

ALL-ELECTRIC, SINGLE-PACKAGE SAMPLE-DYEING UNIT, the Obermaier Stienen machine, designed for rapid laboratory test dyeing, was on display at the booth of Standard Fabricators, Inc., 355 Walton Ave., Bronx, N. Y. With a pump mechanism that includes a positive feed instead of centrifugal circulation, and with the "Jet Dye Spindle," the no-steam unit is said to extract and dry in one hour instead of four. Stainless tubes or cake holders take yarn packages up to 1¼ lb. in weight.



NEW WILLIAMS HOT-OIL DYEING UNIT in a 12-in.-wide-rolls laboratory model was on exhibit at the booth of Morrison Machine Co., 1171-1225 Madison Ave., Paterson 3, N. J. Jacketed for 50-lb. steam pressure to meet the special requirements of hot-oil dyeing, the unit has a 3-roll Microset padder and a 2-roll nip. There is more clearance between baffles and at the bottom ends of the baffles than on a previous model, so that there is less tendency for over-boiling. Space requirements for the complete unit are 6 ft. by 4 ft.

The company claims that savings in dyes and chemicals obtained by the hot-oil process more than offset oil costs.

▶ Fast Blue GLF Conc, believed to be the first blue acetate dyestuff that is outstandingly fast to both gas and light, was the highlight of the display of Tennessee Eastman Co., 10 East 40th St., New York 16. It and others in the Eastman acetate dye group have been developed especially for the dyeing of synthetic fibers and more particularly Dacron, nylon, and dynel.

Other colors of recent development in the group that are now available are Fast Yellow 8 GLF and Fast Violet 3R-GLF.

▶ Rayon dyed in the spinning process with a wide range of colors was shown by Chatillon-Milan. U. S. distributor is Snia Viscosa, 689 Fifth Ave., New York, N. Y.

▶ Scourclean A and Scourclean X are two new products shown by Richmond Oil, Soap & Chemical Co., Inc., 1041-43 Frankford Ave., Philadelphia 25, Pa. Scourclean A, made with soap and aromatic alcohols, is said to be a most effective remover of any kind of oil from any kind of fabric. The product will carry 15 times its own volume of lubricating oils, and it is harmless to wool, cotton, and rayon.

Scourclean X is a combination of selected synthetics coupled with special cresols.

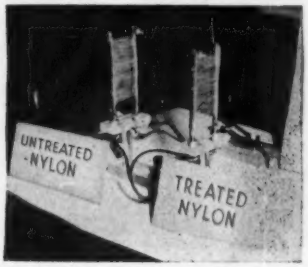
While it does not have the oil-removing ability of the Scourclean A, it is much more responsive in hard water and is an aid in removing soap used in fulling.

▶ "Peregene A," said to be an excellent new stripping agent for vat, sulfur, and direct dyeings, was offered for the first time by General Dyestuff Corp., Antara Products Div., 435 Hudson St., New York 14.

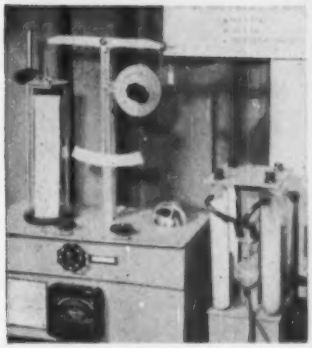
Chemically the new product is a polyvinyl pyrrolidone. As a weakly cation-active material, it forms stable cation-anion complexes with dyes containing sulfo groups as well as those that in aqueous solution contain a phenolate grouping. Being strictly a stripping product, it cannot be used for leveling purposes.

A NEW SCORCH TESTER for measuring chlorine retention was shown by AATCC Research Committee. Tester will be made by Atlas Electric Devices Co., 361 W. Superior St., Chicago 10, Ill.

STAINLESS CAKE-HOLDER for use in cake dyeing was shown as a new product of Standard Fabricators, Inc., 355 Walton Ave., Bronx, N. Y.



ANTI-STATIC TESTER for checking effectiveness of anti-static agents and properties of fibers and yarn has been developed by Napco Chemical Co., First & Essex Sts., Harrison, N. J.



DYNAMIC DIMENSIONAL-CHANGE METER developed by AATCC Research Committee is designed to measure and record directly shrinkage, relaxation, elongation, and restorability as changes occur during wetting and drying, and during changes in relative humidity. Built-in meter indicates relative humidity.

▶ "Spectroline" bases for fast colors that have been completely diazotized and then stabilized so as to prohibit coupling with naphthols in solution or naphtholated material until the stabilizer is broken down, were featured at the booth of Hilton-Davis Chemical Co., 2235 Langdon Farm Road, Cincinnati, Ohio.

RAPID-SCANNING SPECTROPHOTOMETER with electronic indicating device that attracted much interest at the booth of American Optical Co., Eggert and Sugar Roads, Buffalo 15, N. Y., has been developed both for monitoring colored flowing liquids in which spectral absorption can be used as a formula criterion, as in textile dyeing; and for studying rapid color changes.

Spectrophotometric curves are produced instantly and continuously on the wavelength-percentage reference grid on the face of the cathode-ray tube (left), next to Paul Rosenthal, company representative. Both coordinates of the curve produced are linear. Manual expansion of the curve on either coordinate is also provided for.

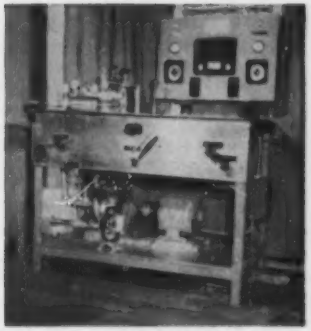
Wave-length range is 400 to 700 millimicrons, scanning interval is 1/200 sec., and repetition rate is 60 times per sec. The transmission unit (right) is 27 in. long, 18 in. wide, and 19 in. high; it weighs 95 lb. without voltage regulator. The reflection unit is 17 in. long, 12 in. wide, and 8 in. high. It weighs approximately 30 lb.

"TEXTRALIZING" MACHINE for imparting permanent crimp to straight natural or man-made fibers was on display at the Alexander Smith, Inc., Yonkers, N. Y., booth. By use of the machine, greater fabric bulk and resilience are reported, as well as material savings of from 5 to 10% in carpet manufacture and even higher percentage savings in blanket and upholstery-fabric manufacturing. The process is being licensed to interested companies.

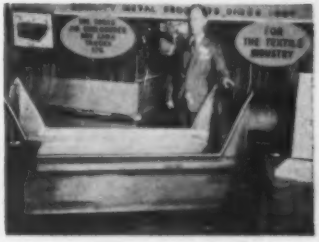
▶ Versenes, sodium salts of ethylene diamine tetra acetic acid used as chelating agents for the containment of metals in solution, were described at the booth of Bersworth Chemical Co, 875 Waverly St., Framingham, Mass. Used for exacting chemical control of cations in solution, the organic complexing agents put metals into solution to keep them from depositing on the goods and to give true dye shades and colors.

▶ Hiltamine Arctic White Extra, a new optical brightening agent for cottons, linens, and viscose rayons, was shown by Hilton-Davis Chemical Co., 2235 Langdon Farm Road, Cincinnati, Ohio. Used on textile yarns and made from non-critical materials, the new optical bleach absorbs invisible ultra-violet light rays and transforms the light so that it is visible to the naked eye. The agent is applicable either by padding or exhaust methods.

IMPROVED ACCELERATOR for accelerated testing of fastness can now take larger (5x5-in.) samples. Instrument can also be adopted to measure felting properties, resistance to laundering abrasion, and wear. Device will be made by Atlas Electric Devices Co., 361 W. Superior St., Chicago 10, Ill.



COMBINATION HIGH-TEMPERATURE AND CONVENTIONAL-DYEING machine, Model 7S, capable of laboratory dyeing of 1-to 1½-lb. yarn packages on 1⅝-in. or ⅝-in. tubes, springs, Barber Colman cheeses, cones, skeins, or in raw-stock form, was shown by Gaston County Dyeing Machine Co., Stanley, N. C. With reversible flow and temperature ranges from 60 to 212° F., and from 212 to 300° F, the steam-heated unit is made of stainless steel and is equipped with automatic controls throughout. Over-all dimensions are 4x2½x3 ft., plus a 2-ft. panel at the back.



STAINLESS-STEEL BUNDLED-PIECE-GOODS TRUCK with a curved bottom for liquids to flow off at the sides toward either end and into a discharge toward the bottom center, away from foot, was shown by Glasco Equipment Corp., 10 Wait St., Paterson, N. J. Sides are cut away for operator ease in handling bundles in succeeding operations. The new truck was shown by C. G. Welchman, company representative.

▶ "Namico H 188," a synthetic dye-bath assistant shown for the first time by National Milling & Chemical Co., Inc., 4601 Nixon St., Philadelphia 27, Pa., is said to have excellent sequestering, penetrating, and detergent properties. It is especially well adapted for use on synthetic fibers, including Orlon and Dacron.

"Namisyn Gel," a paste-like anionic detergent and dispersing agent with excellent colloidal properties; and "Namico C Flakes," a low-titer soap for the rapid processing of all fibers, yarns, and finishes, were offered the trade at the National Milling & Chemical Co. booth. The former is stable to both dilute alkalis and dilute acids; the latter is guaranteed minimum 90% anhydrous soap.

(*Continued on page 216*)

"We have new fibers with fantastic vistas of opportunity. The challenge to management is to use them wisely, to find out what they are best adapted for, to research and experiment, to improve quality and performance, to find out what the public wants, and to get them goods that are better adapted to fill those needs than the world has even seen."

"WONDER FIBERS"

. . . A Challenge to Management

- Industry tends to over-publicize new "wonder" fabrics before they are in commercial production. Practice of automobile industry recommended.
- Industry should use new fibers wisely, find out best uses, improve quality and performance.
- Fabrics should be merchandised on basis of job each can do for particular end use—not on novelty or publicity value.
- Man-made-fiber community needs industry-wide promotional and public-relations body.
- Burlington Mills spending $4,000,000 in 1951 on research, experimentation, and quality control. Guiding principle is: "Be right rather than first."

By J. SPENCER LOVE
Chairman of the Board of Directors, Burlington Mills Corp.

We are standing today on the threshold of some of the greatest fabric advances yet open to the textile industry. This advancement, however, will not come of itself. It will take hard work and a substantial period of time. And it will take wise and alert direction by management to produce these so-called "wonder fabrics."

Our industry tends to forget that a fiber is not a piece of fabric. At the risk of sounding elementary, let me emphasize: a fiber is a raw material. Just what does it take to make this basic substance a fabric of utility and beauty that can be put into garments at a cost people can

Transcript of talk, less introductory remarks, delivered at the 30th Annual Convention, AATCC, New York.

afford to pay? It takes constant research and experimentation to adapt the fiber to its best end use. It calls for many skills and infinite pains in spinning, weaving, and processing. It needs meticulous care in dyeing and finishing. It calls for regular testing and wear testing to obtain the highest quality standards. And it demands astute and imaginative merchandising and promotion.

Research Expenditures Nearly Tripled in Four Years

All this work costs a "pretty penny." For example, as a company, we are spending $4,000,000 a year in this increasingly important area of research, experimentation, and quality control. This figure compares with $1,500,000 in 1947 and $500,000 in 1941 in the same fields. So you can see what the trend is in our company and what we believe must be done in order to achieve the best possible fabrics from all fibers. The raw fiber must indeed be "put through the mill."

Industry Publicizing Fabrics Too Soon

We have all read and heard about the many new wonder fibers that are now in the development stage. All indications are that they are truly wonder fibers. I believe, however, that our industry, my own company included, in its anxiety to move forward with new developments, has had the tendency to over-publicize these fibers long before they are in commercial production. Perhaps it would be well for us to take a lesson from our friends, the automobile manufacturers. They do not publicize their new lines until a few weeks before the models are in the showrooms for the consumer to buy.

When we come down to reality, certainly we must face the fact that most of these new fibers are not yet in commercial production by our research-minded producers. Moreover, we are a long way from knowing all the characteristics from a fabric standpoint of each of these fibers, not to mention the tremendous possibilities and directions of blends. Whetting the appetites of our manufacturers and consumers for these revolutionary new textile products long in advance of actual volume production has detracted interest from the products we are selling today. I suggest that each firm within our industry give serious consideration to this point on over-publicizing new developments before commercial production is available.

Still Tremendous Opportunities in "Older" Fibers

Let me add here a pertinent word with respect to our so-called older man-made fibers—rayon, acetate, and nylon. We have accomplished a great deal with those wonder fibers. After many years of experimentation we are still continuing to develop wonder fabrics from these established fibers. In our eagerness and excitement over some of the newer fibers, let us not forget that there are still tremendous opportunities open for improving fabrics of these yarns and broadening the base of their end-use applications.

Too often, I believe, we are inclined to be like the advertising experts. You all know how often a panel of agency men will choose what they think is the best sales-pulling copy and then, lo and behold, that final arbiter of practically everything in America—the little woman at home—will decide exactly the opposite.

The reason this happens is fairly obvious, and just as it is true in the advertising fraternity it is often true of us in the textile industry. We fall into the bad habit of all businessmen—the rather satisfying, but unrewarding, practice of talking to ourselves. To be more specific, we say to ourselves, "Isn't nylon a wonder fiber?" Isn't Orlon or Acrilan the perfect fiber for year 'round clothing?" and then we can cap it off by saying, "Let's put some Dacron, dynel, Vicara or any other new fiber into this fabric and then sit back and watch the profits come in." But it just doesn't happen that way. In a little while I will outline for you what I think we must do, and what we must give in order to reap the just rewards of that which has been given to us to work with.

But in order for us to visualize the broad vista of opportunity in front of us, I would like to briefly trace our path up to this threshold.

Progress in 25 Years Tremendous

We have come a long way in the man-made textile industry. It's only about a 25-year span that makes up our entire industry. It's even much less time since we've really put our backs to the wheel and made tremendous progress. Nothing indicates the fascinating growth of the man-made fabrics industry more than the shift in fiber consumption in this country since 1925. In that year, cotton represented 86.6%, wool 9.9%, silk 1.9%, and chemical fibers accounted for only 1.6% of fibers consumed. By 1940, cotton was at 81%, chemical fibers had risen to 10%, or second in rank, while wool stood at 8.4% and silk 0.7%.

By 1950, the figures read 68.8% for cotton, 21.8% for man-made fibers, 9.3% for wool and 0.08% for silk. In the last 30 years, the use of rayon and acetate has risen from 8,700,000 lb. to 1,200,000,000 lb. It is even more important to point out the spectacular rises that have taken place in the end-uses of rayon, acetate, and nylon fibers. In 1929, women's rayon suits were not even mentioned in the census. By 1950, over 40% of all women's suits were made of rayon and acetate fibers. About 50% of all women's skirts are now made of rayon and acetate fabrics. Over 70% of all unit-price dresses use rayon and acetate. Over 75% of all women's blouses are manufactured of man-made textiles.

We all know about the spectacular growth rayon, acetate, and nylon have made in men's summer suits. Five years ago only 10% of men's summer suits were made of these fibers. For the first time last year rayon, acetate, and nylon summer suits outsold tropical worsteds and worsted gabardines by 56% compared to 40%. As late as 1946, rayon- and acetate-fabric slacks accounted for about 25% of the total trouser production. By 1950, there were more rayon- and acetate-fabric slacks made than wool (about 20,600,000 rayon to 19,100,000 wool). Rayon and acetate are used to great extent in bed blankets, rainwear, bathing suits, women's sportswear, men's underwear, carpets, and many prewar volume fields such as lingerie, hosiery, linings, decorative fabrics and upholstery cloths, sweaters, dressing gowns, bathrobes, linens, and over-the-counter yard goods.

Those few figures tell the story. The strides in our man-made textile industry have been nothing short of tremendous. It has expanded our field from a few end uses to a point where the fibers are used in practically every textile-manufacturing industry.

How has this field been so broadened? It has been done generally in two ways: One, through the hard work of technicians who have improved our processing methods, our weaving operations, our dyeing and finishing techniques, and the necessary establishment of rigid standards of quality. And, two, management's vision has directed those efforts to their ultimate payoff. It is on this latter point that I want to spend most of my time—particularly in relation to the challenge that the old and new man-made fibers present to management.

(*Continued on page 238*)

ADVANCED TECHNIQUES
Disclosed in AATCC-Convention Papers

- **Copper method of dyeing Orlon acrylic fiber gives a full range of shades with satisfactory fastness properties**
- **Photometric methods have been worked out for measuring "brightness" through ultraviolet-radiation measurement**
- **Wool-fiber-lubrication problems are now easier to resolve by means of practical moisture meters and the use of nomographs**

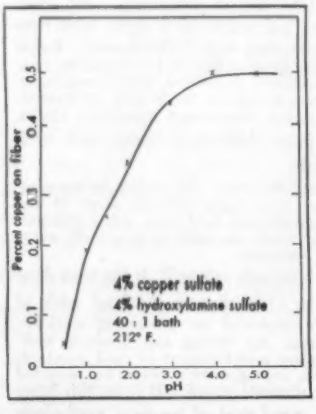
THE MOST SUCCESSFUL national convention yet held by the American Assn. of Textile Chemists & Colorists, six weeks ago at the Hotel Statler in New York, was the scene of the delivery of a score of technical papers by technicians in and close to the wet-processing branch of the textile industry.

Summaries of the outstanding papers given are presented in the following pages.

ORLON DYE RANGE Improved With Copper-Dyeing Methods

By R. H. BLAKER and J. F. LAUCIUS
E. I. du Pont de Nemours & Co., Inc.

The copper-dyeing method has made possible dyeing of Orlon Type-41 acrylic fiber in a full range of shades with satisfactory fastness properties. A satisfactory dyeing procedure for Orlon has been developed and progress has been made in understanding the mechanism involved in copper dyeing.



DYEABILITY OF ORLON acrylic fiber (the amount of cuprous ion absorbed) depends on the pH of the dyebath. In practice it is desirable to maintain the pH between 2 and 3.

The choice of reducing agents is limited to those that do not destroy the dyestuff and to those that reduce the copper at approximately the same rate as it is absorbed by the fiber.

The sodium and zinc-formaldehyde sulfoxylates effectively reduce cupric salts but they also attack certain classes of acid colors. It is possible to avoid this destruction of color by pretreating the fabric in a bath containing the cupric salt and the reducing agent, destroying the excess reducing agent, and then adding the dye.

However, even when the pretreatment procedure is followed, extreme care must be exercised when the formaldehyde sulfoxylates are used to avoid the formation of metallic copper in the dyebath. At temperatures above 170° F., these reducing agents form cuprous copper faster than it can be taken up by the Orlon acrylic fiber. If the concentration of cuprous ion in the bath exceeds a certain amount, the cuprous ion disproportionates into cupric ion and metallic copper.

When metallic copper is formed in the dyebath, it precipitates on the fiber and on the dyeing equipment as a finely divided powder. The result is a weak, uneven dyeing contaminated with finely divided metallic copper.

It is possible to stabilize the cuprous ion in solution by the addition of agents that can form soluble complex ions with cuprous copper. Hydroxylamine sulfate has been found to be particularly useful in the copper-dyeing method since, in addition to reducing the cupric salts, it forms a soluble complex ion with the cuprous ion. The stability of this complex is such that the cuprous ion is readily available for absorption by Orlon.

Hydroxylamine sulfate appears to be perfectly safe and to cause no significant color decomposition. Copper dyeings made with hydroxylamine sulfate proceed smoothly, and no particular care has to be exercised in

▶ Copper-dyeing methods are applicable to fibers composed entirely of acrylonitrile as well as to the various acrylonitrile interpolymers. The unique feature of this new procedure for dyeing is that copper in the cuprous-valence state is employed as an assistant for dyeing with acid and direct colors.

It is preferable to add a cupric salt and a suitable reducing agent to produce the cuprous ion at approximately the same rate as it is absorbed by the fiber. A wide variety of acid and direct colors may be used. The principal requirement for the dye appears to be at least one sulfonic-acid or carboxyl group in the molecule. More than one acid group in the molecule seems to reduce the dye affinity.

• • •

adding the color or in controlling the rate of heating of the dyebath.

Data on the simultaneous rates of exhaustion of cuprous ion and of an acid dye from a typical dyebath indicate that the rate of absorption of copper is the controlling factor in the dyeing. The over-all rate of dyeing is much greater at 212° F. than at 206° F.; and, in practice, dyeings made by the copper method should be as close to 212° F. as possible if adequate exhaustion is to be achieved in a reasonable length of time.

The amount of cuprous ion absorbed and hence the dyeability of Orlon acrylic fiber depends on the pH of the dyebath. Successful dyeings can be made in the pH range of 1.5 to 5 but, in practice, it is desirable to maintain the pH between 2 and 3.

The coppered fabric has a tendency to become yellow if the pH of the dyebath is greater than about 3; if the pH is much less than 2, there is too little copper absorbed to give satisfactory dyeings.

AZO DYES Can Be Made Outstandingly Washfast

By JOHN D. GUTHRIE, Southern Regional Research Laboratory

Cotton fabrics colored by attaching certain azo dyes to the cellulose by ether linkage have outstanding washfastness. These dyes contain the sulfatoethyl group and are reacted with cotton by curing in the presence of sodium hydroxide. The dyes act as the etherifying agent and attach to the cellulose by ether linkage in a single operation.

Preparation of Dyes

2-(p-Aminophenoxy) ethylsulfuric acid (1 g.) was dissolved in 13 ml. of water and 1 ml. of concentrated hydrochloric acid and diazotized at about 13° C. with 0.3 g. of sodium nitrite. After cooling to less than 5° C., this solution was poured slowly into an ice-cold solution of 0.47 g. of p-cresol and 1.35 g. of sodium carbonate in 9 ml. of water.

The resulting mixture was then warmed to 50° C. The dye was salted out by the addition of 1 g. of sodium chloride, was separated by filtration and dried in a vacuum desiccator. The crude dye weighed 2.5 g. and was very similar to a fast yellow in properties and appearance.

Since it was thought that a dye with greater solubility in strong sodium hydroxide than the p-cresol dye just described would react better with the cotton, a dye was prepared by the procedure given above, but resorcinol was used instead of p-cresol. This resorcinol dye showed improved solubility in strong sodium hydroxide solution and reacted with cotton fabric to give a yellowish-orange color.

In a similar manner, 2-(p-aminophenoxy) ethylsulfuric acid was diazotized and coupled with other phenolic substances to produce dyes of superior solubility in strong sodium hydroxide.

Particular dyes prepared in this way that have been found suitable for attachment to cotton by ether linkage are indicated in the following table:

Coupling Agent	Color When Etherified with Cotton Fabric
p-Cresol	yellow
Resorcinol	yellowish orange
1,8-dihydroxy-3,6-disulfonic acid	purplish red
1-amino-8-naphthol-4-sulfonic acid	reddish blue
2-naphthol-3,6-disulfonic acid	red
2-naphthol-6-sulfonic acid	peach pink

Fabrics colored by etherifying dyes to the cellulose by the method described above had outstanding (Class 5) washfastness.

They also showed little loss of color when boiled in a 1% sodium-hydroxide solution for 6 hr.

However, their lightfastness was only fair. In Fade-Ometer tests, some were better than the No. 3 standard, and others were slightly worse. All showed detectable fading in 20 hr. In direct comparison with cotton fabric dyed with commercially developed azo colors, they showed equal or better lightfastness and much better washfastness.

WOOL STRIPPING and Dyeing Can Be Done Simultaneously

By F. A. PRISLEY, Watson Park Co.

It has been found that under suitable conditions satisfactory results may be obtained by dyeing and stripping reused and reworked woolen piece goods or raw stock in one bath, in a time-saving procedure known as the Ogden Process. The new process may thus be used to eliminate one or even two of the three baths that ordinarily go with the stripping and redyeing procedure. No expensive, hazardous, or unusual chemicals are required.

Procedure

As soon as suitable dyestuffs could be found to resist stripping agents and to satisfy other requirements such as fastness to light, fastness to fulling for the stock dyes, leveling, etc., the search for practical methods began. The following procedure was evolved.

For piece dyes, the goods are prepared and loaded into the kettle as usual. Materials are added as follows:

dyestuff
acid
strip

in that order into a cold bath. The goods are brought to the boil in an hour and boiled 30 min. At this, point 10% calcined Glauber salt is added, the boil continued for 45 min., then washed.

The following information has been compiled:

1. The acid used depends on the type of dyestuff used, and in this respect the process follows normal dyeing procedures.

2. It seems to be the case that the stripping does not ordinarily vary critically with the kind of acid used.

3. There are occasions when consideration must be given to the kind and amount of acid used because of the behavior of certain dyestuffs that may be present on the fibers being stripped.

4. Generally, it has been found that each procedure, dyeing and stripping, works about the same in the combined operation as when carried out in separate baths. For example, if the goods required a preboil with ammonia to get the best possible bottom when stripped before dyeing, then the preboil is necessary for the same result by the Ogden method.

5. Toning to shade is carried out in the usual manner.

6. Stripping or dyeing results are not claimed to be superior to results obtained by the normal procedure.

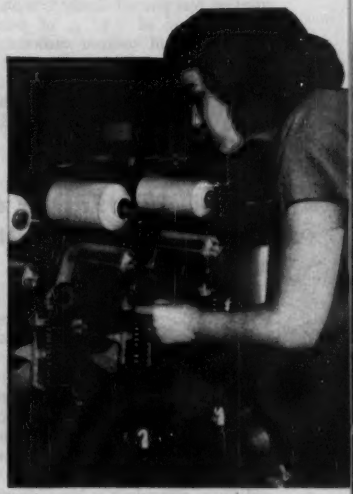
7. The lightfastness of colors used

A SYNTHETIC FABRIC MANUFACTURER saved 25 percent on formula costs by substituting a Sun Textile-Process Aid for the three competitive oils he had been using. In addition to saving time and money, he has attained a great improvement in smoothness and penetration of the size.

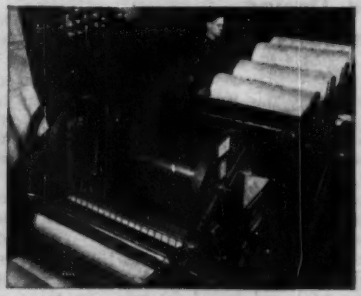
HOW 4 MANUFACTURERS HAVE BENEFITED FROM SUN'S TEXTILE-PROCESS AIDS

By switching to Sun Textile-Process Aids, each of these four manufacturers improved quality, increased plant efficiency and effected substantial savings. The results are typical, not unusual . . . *complete details available on request.*

More and more textile manufacturers are turning to Sun "Job Proved" Process Aids to cut costs, speed production, improve quality, protect valuable machines. Why not get more information from your Sun representative? His services are free for the asking. Just call the nearest Sun Office or write to Department T-9.



A WOOL PROCESSOR increased his yield 3 percent when he changed to a Sun Textile-Process Aid. It improved the quality of his finished product, and speeded up production by saving preparation time and penetrating the wool fibers quickly and thoroughly.



A COTTON FABRIC MANUFACTURER ended his corrosion troubles by switching to a Sun Textile-Process Aid. At the same time he improved the quality of his fabrics, speeded up production, and widened the profit margin. In oil costs alone, he now saves $1,000 a year.

A NYLON THROWSTER found that a Sun Textile-Process Aid gave better lubrication and protection to the sized thread. It reduced breakage and also eliminated preferential pickup. Along with economies in production, he has lowered his oil costs substantially.

SUN INDUSTRIAL PRODUCTS

SUN OIL COMPANY, PHILADELPHIA 3, PA. SUN OIL COMPANY, LTD., TORONTO AND MONTREAL

SUNOCO

to date seems to be equal to that of those dyed normally.

Stock Dyes

Stock dyes are handled as follows:

Goods are loaded as usual and the material added as follows:

dyestuff
acid

into the cold bath. The temperature is raised to 180° F., at which point the strip is added and the bath raised to the boil. More acid is added, and boiling is continued for 30 min. The chrome is added and boiled 30 min.; then the goods are washed.

Fulling fastness shows no variation from that obtained by usual methods of handling. As in the case of piece dyes, if certain stocks require an alkaline preboil to get certain shades, then such requirements are included in the Ogden process.

The above methods have been used in several mills on plant-scale production on various fabrics and stocks. Licensing agreements are available.

The method can be adapted to dyeing textiles other than woven fabrics. As an example, yarn may be vat dyed in continuous fashion in what holds promise of being a very interesting development.

Time and experimentation will give the answers to the many, many questions that have been asked concerning the potentialities of the method. The number of machines now being built and installed is increasing. When these have been put into operation and run on different qualities and constructions, a more comprehensive picture will be available.

In short, the process is an economical way of vat-dyeing fabrics in short yardages with excellent results. This fact establishes the process as a factor in the vat-dyeing field; how extensive a factor remains to be seen.

MOLTEN-METAL Dyeing Improves Short-Yardage Runs

By **F. S. RICHARDSON**, Waldrich Co.

The Standfast Dyers & Printers molten-metal dyeing-process principles are well known. In the new process, cloth is simply impregnated with dye liquor and passed through molten metal, where dyeing is completed.

The new method was developed in the Standfast dye plant for the company's particular needs and requirements. Other units may be in operation, at this writing; however, no unit outside the Standfast plant has run cloth. There is therefore a great deal of experimental and development work to be done on a large number of fabrics.

There may be fabrics that do not lend themselves to satisfactory performance on the unit, just as this is true of every other type of vat-dyeing method now in use. There is some indication that certain types of fabric will have to be pigment-padded and then flue-dried before running through the metal bath. This operation has been carried out by Standfast; and as is customary with such a requirement, the pad and dryer could be in tandem with the rest of the equipment.

Experimental work with direct colors has been undertaken with some promising results. Sulfur colors, free of sulfur, can be successfully dyed.

STATIC ELIMINATOR Has Electronic Control

By **JOSEPH A. LOPEZ**, Kannok Mills and **JOHN K. HEWSON**, The John Hewson Co.

A new type of static eliminator uses electronic control methods for the electrical discharges needed to neutralize static in processing machines. At the points on the machine where static develops, bars that discharge electricity to kill static are connected to a central-station control system.

Control is so accurate that the same amount of electricity is discharged at each discharge point on the control bar. This control feature largely eliminates the objections to former electrical neutralizers for static elimination.

In the use of any electrical static eliminator, it is necessary to deliver the needed electrical charge to the discharge bar. If each discharge point on the bar does not receive the same amount of current, static elimination will be uneven. If too little current is delivered, static is reduced but not killed. If too much is delivered, the fabric may be recharged.

The electronic eliminator has controls for overcoming these conditions.

When the static in the stock has been neutralized, the flow of electrical ions is instantly diverted from the discharge points in the bar to built-in collecting targets. Thus, it is possible to deliver sufficient charge to insure elimination of the static, with no fear that overcharge will be transferred to the stock or machine.

The eliminator was designed specifically for use on high-dielectric synthetic fibers processed at high machine speeds. It is effective on static in a range from an almost negligible charge to a charge that will arc 12 in. or more.

The new control method makes the eliminator completely safe. Machines cannot be charged so that they shock workers, and the eliminator may be used with complete safety in locations where static may create a fire hazard.

What Static Does on Some Machines

Cards
1. Web runs over the doffer comb and loads up the doffer.
2. Makes excessive waste, lowers production, and increases work.
3. On woolen cards, the sliver breaks and laps around the rub aprons, causing excessive waste.

Drawing
1. Sliver laps around rolls.
2. Sliver sticks to the side of the delivery can and will not coil properly.

Warpers
1. Excessive yarn ballooning, causing breaks.
2. "Ridging" of the yarn on the beam.
3. Yarn "flows" over the beam ends.

Looms
1. Static attracts dust and lint, which build up at the drop wires, drop on the warp yarn, and are woven into the cloth.
2. Filling in the shuttle sticks to the loom, causing looped-filling defects or possibly snags.
3. Static in the cloth may cause yarns to repel each other and result in "cracks" in the cloth.

Tenters, Loop Dryers, Shears, Sanforizers, etc.
1. Static in the cloth attracts dirt, dust, and lint.
2. Causes cloth to wrap around rolls.
3. Interferes with proper folding.

Calenders
1. Static on the rewind roll may cause arcs 3 or 4 in. long, frightening operators and possibly puncturing the cloth.
2. Attracts dirt, dust and lint.

Printing and Flocking
1. Attracts ink beyond the edges of the pattern, causing "crow's feet" or "feathering."
2. In printing, creates fire hazard when static arcs in the presence of the volatile solvent used as a carrier for the printing color.

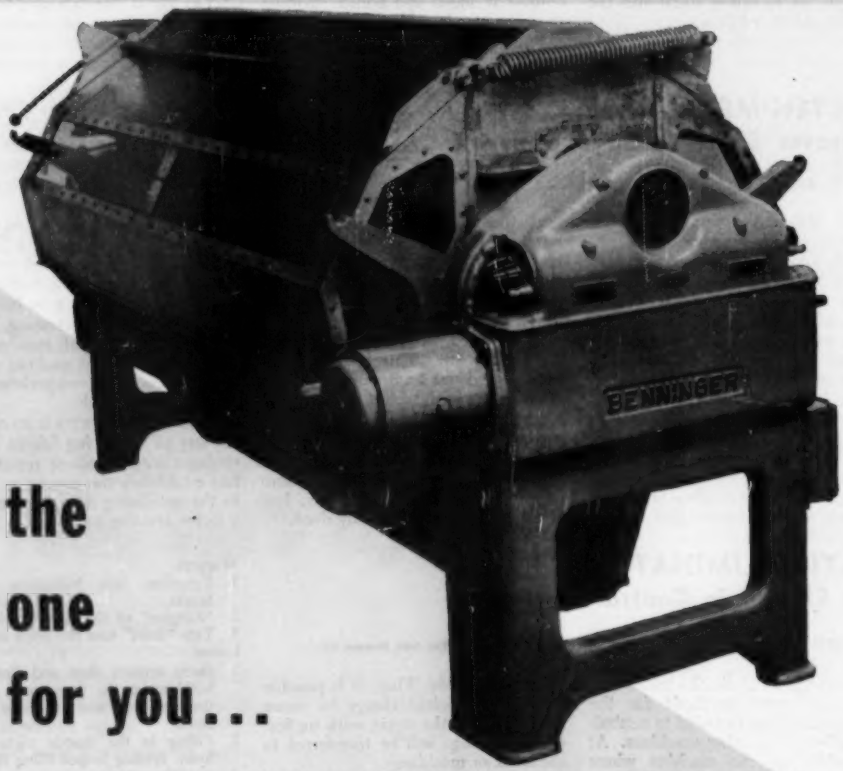
Knitting

Interferes with handling stockings, sometimes causing snags or pulled threads.

Boarding

Interferes with handling and folding.

If the "Big Batch" Jig is



the one for you...

The 40-inch batch Benninger Dye Jig handles 1200 yards at one time. Saves on time, labor and dyestuffs. Can also be used for smaller lots. No problem of matching shades. Eliminates the necessity of processing goods in a number of small machines. Increases production.

✓ Check these features of the Benninger Dye Jig

Automatic reversing and stopping with self-acting passage counter.

Adjustable spring-pressure squeezing device.

Oscillating balance expander for creaseless runs on finest goods.

Covered top (optional) lowers steam consumption, prevents oxidation of cloth selvage, stops dyehouse fogging.

Write for full details.

H. W. BUTTERWORTH & SONS CO., BETHAYRES, PA.
157 Westminster Street, Providence, R. I. : : 1211 Johnston Bldg., Charlotte, N. C.

BUTTERWORTH

Photometric Methods Applicable In Measuring Textile BRIGHTNESS

By OPAL L. SHELBURNE, General Dyestuff Corp., and DR. J. BEISWANGER, General Aniline & Film Corp.

Brightening agents are fluorescent compounds that absorb ultraviolet radiation and emit visible light when they are applied to a subtrate. Compounds offered for use must be so chosen that the color of their emission (blue) will neutralize the yellow that is common to off-white materials.

It would be desirable to measure the over-all whitening effect produced by the use of these fluorescent compounds, but adequate instrumentation is not at hand to do this in a simple fashion. One must therefore rely upon visual observation to judge this over-all effect.

Since it has been shown that satisfactory brighteners are very similar in their colorimetric properties, recourse may be had to abbreviated photometric methods that measure the efficiency with which various compounds produce the fluorescent emission that causes the whitening effect.

When ultraviolet radiation from a filtered source strikes a brightener-treated swatch, part of the radiation is reflected and part absorbed. The greater portion of the absorbed radiation is re-emitted as visible fluorescence.

If a photocell covered with a filter that passes only ultraviolet radiation is placed in the path of the reflected and emitted light, it will "see" only the reflected ultraviolet and hence measure the ultraviolet reflectance. If the filter is now replaced with one that excludes ultraviolet, but passes visible radiation, the brightness of the fluorescent emission can be measured. The measurements can be standardized by adjusting the response of the photocell to a standard opal glass plate.

An instrument based on these principles was constructed at our Easton laboratory for less than the price of a Launder-Ometer.

The fluorescent brightness measured in this manner is a function of the concentration of active ingredient on the cloth. A study of a concentration series will, therefore, enable one to make strength comparisons of various samples under the most desirable condition, that is, when applied to the fabric.

Any treatment that may be deleterious to the brightener, such as treatment with bleaching agents, will be accompanied by a loss in brightness if the brightener is decomposed. It is therefore possible to follow such treatments quantitatively by measurement of fluorescent brightness.

Non-Discoloring Inhibitors For GAS FADING Sought

By W. J. MYLES, W. G. PAIST, and V. S. SALVIN, Celanese Corp. of America

Nitrogen dioxide, when generated in concentrations of one part per 1,000 or less, will give color changes approximating those caused by combustion gases. Since nitric oxide in the presence of a large excess of oxygen is rapidly oxidized to nitrogen dioxide, it seems probable that it is the latter material that is primarily responsible for gas fading. It is not known whether it is the gaseous nitrogen dioxide or its hydrolysis products that normally exist and react within the acetate. It was recently held that the diazotization of aromatic amines in weakly acid solutions of nitrous acid (a condition that resembles that in cellulose acetate during gas fading) is a reaction between the free amine and N_2O_3 formed by decomposition of the nitrous acid.

Absorption of Nitrogen Dioxide By Various Fibers

Nitrogen dioxide is absorbed by cellulose acetate and remains in large part unchanged. For example, acetate fabric may be exposed for 1 hr. at room temperature to nitrogen dioxide generated in the standard AATCC chamber by the addition of 50 ml. of 5% phosphoric acid to 3 gr. of sodium nitrite in 50 ml. of water. After a 10-min. airing, if the exposed fabric is pressed for 1 hr. onto a strip of the AATCC Standard Test Fabric No. 1, the test fabric will be considerably faded. This test, applied to various fabrics, gave the results shown below.

Relative Amounts of Nitrogen Dioxide Liberated from Exposed Fabrics (Dry-Contact Method)

Undyed Fabric	Change of Test Fabric with Contact Time 30 Min.	60 Min.	120 Min.
Cotton	No change	No change	No change
Viscose	No change	No change	No change
Celcos	Sl. fading	Mod. fading	Mod. fading
Acetate, bright	Mod. fading	Bad fading	Bad fading
Dacron	Mod. fading	Bad fading	Bad fading
Wool	No change	V. sl. fading	V. sl. fading
Nylon	No change	No change	No change

In a second test method, a 2x2-in. piece of the exposed fabric is placed for 1 hr. at room temperature in 50 ml. of water made acid with 1 ml. of acetic acid and 5 ml. of 1% hydrochloric acid. Nitrogen dioxide diffusing into the water will cause the fading of a ¼x1-in. piece of the AATCC test fabric. The results of this test on several fabrics are shown below.

Relative Amounts of Nitrogen Dioxide Liberated from Exposed Fabrics (Aqueous Transfer Method)

Exposed Fabric	Change of Test Fabric
None	Practically no change
Cotton	Practically no change
Viscose	Practically no change
Celcos	Slight to moderate reddening
Acetate, Bright	Moderate reddening
Wool	Very slight reddening
Nylon	Slight reddening
Orlon	Practically no change

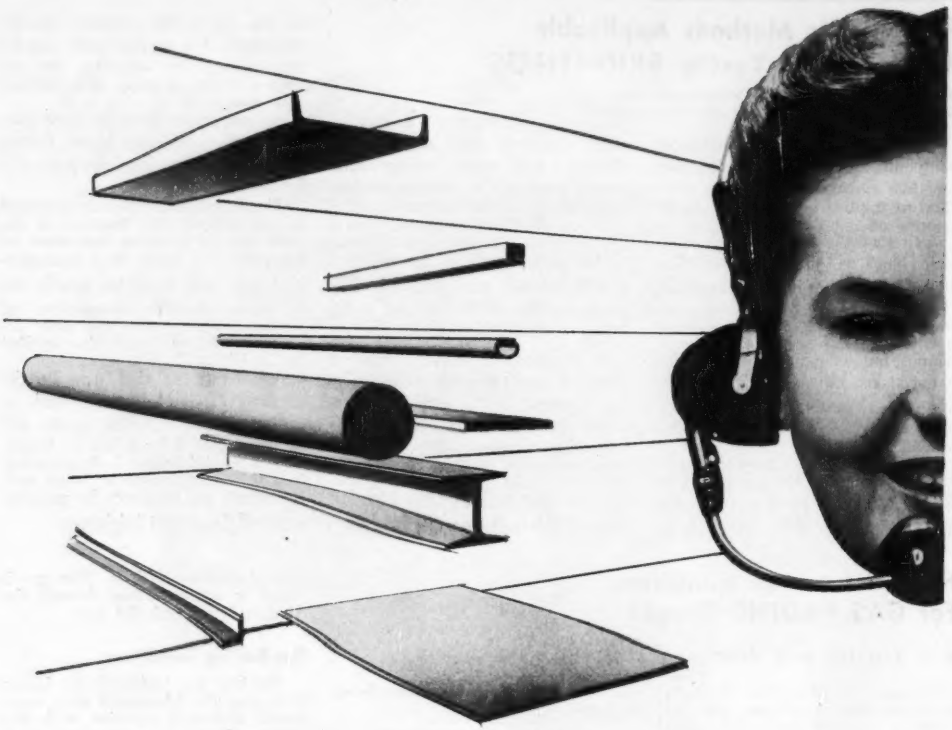
The general conclusion to be drawn from these experiments is that the troublesome gas fading of aminoanthraquinones in acetate is due to the relatively great solubility of nitrogen dioxide in this material and the low rate of reaction with it. The gas is therefore free to diffuse through the fibers and to attack the dyes.

Gas-Fading Inhibitors

The best way to inhibit gas fading is to treat the fabric with some compound that will combine with the nitrogen dioxide (or nitrous acid, etc.) before it can fade the dye. Inhibitors currently in use are of two types: fugitive inhibitors such as melamine, triethanolamine, or sodium acetate are applied in a finishing treatment. They give reasonable protection depending on the depth of shade and the sensitivity of the dye. Their protection is reduced by perspiration, and lost on washing. Some compounds such as triethanolamine reduce the light fastness of viscose dyes, and their use presents problems with viscose/acetate blends. This type of inhibitor acts by maintaining an alkaline condition on the fabric.

A second type of inhibitor has been developed in recent years. This is the permanent, substantive type, that can be applied during dyeing, represented by N,N'-diphenylethylene diamine. These are weakly basic aromatic amines that act by forming nitrosamines and ring-nitrosated compounds. These latter are generally rather yellow, and the use of these inhibitors is accompanied by a yellow discoloration. This is not too objectionable where the quantity of inhibitor is adjusted to the depth of the shade.

The shortcomings of these several inhibitors have led to a search for new structures that would be substantive



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and non-discoloring. A consideration of mechanisms by which nitrogen dioxide or nitrous acid may be consumed shows four major types:

1. The inhibitor may form a salt with nitrous or nitric acid (or other acids that catalyze the fading). The greater their intrinsic basicity, the greater will be buffering action of these compounds.

2. The inhibitor may react to form a nitrosamine or a diazonium salt with the nitrogen dioxide by the same type of reaction that causes the dyes to fade.

3. A tertiary amine may react through cleavage of an alkyl group. This reaction involves the oxidation of the alkyl group, reduction of NO_2 to NO, and formation of the nitrosamine.

4. The inhibitor may act as an antioxidant because of the ease with which NO_2 or nitrous acid are reduced to nitric oxide.

Some non-discoloring substantive inhibitors are diphenylacetamidine and the aralkylamines. They are strong bases. Diphenylacetamidine forms a salt with nitrous acid. It does not react with nitrous acid in acidic conditions. An equal weight of diphenylethylene diamine is more effective than diphenylacetamidine, because it reacts selectively with nitrous acid even in the presence of other acids to form the dinitrosoamine.

Moisture Meters and Nomographs: WOOL-FIBER-LUBRICATION Tools

By PAUL J. MARTIN, Socony-Vacuum Oil Co., Inc.

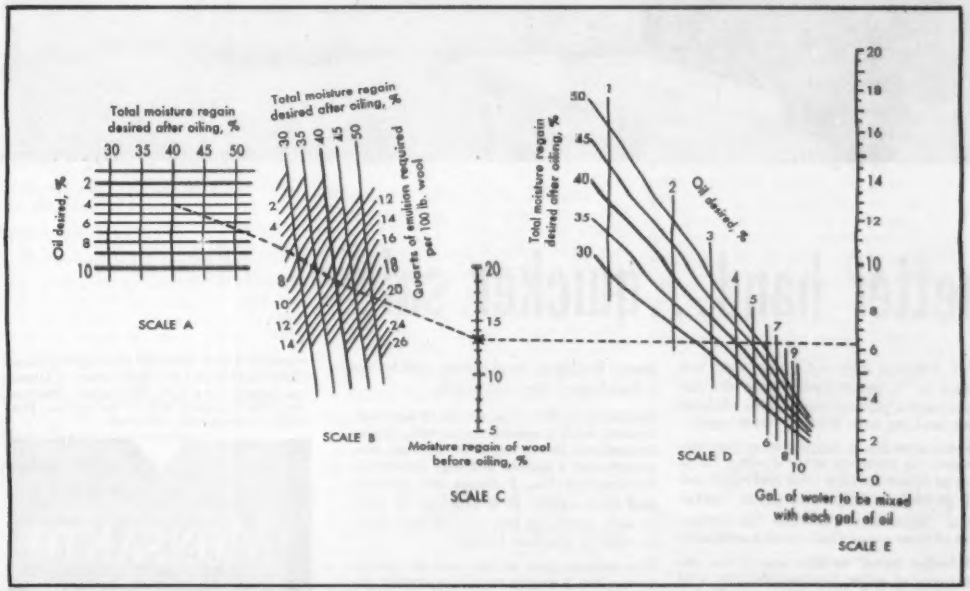
Consider, for example, the problem of determining how much oil and water should be applied at the picker.

It is certain that the amount of oil and moisture already in the blend before picking, and the amount of moisture that will be lost between the picker and the card, are important factors in deciding on the amount of oil and water that should be applied. Yet, in the rush of commercial production, ordinary time-consuming determinations of oil and moisture content are often avoided. Mill personnel assume that each blend contains the same amount of oil and moisture as the previous lot.

Engineered fiber lubrication has helped to simplify this problem by using a moisture meter. This equipment, recently adapted to on-the-spot use in textile mills, makes it possible accurately to determine the moisture content of a wool stock at any point in the mill, in one or two minutes. Cumbersome laboratory methods are thus avoided.

For example, it is possible to know the moisture content in the blending room, and thus to determine how much moisture is lost between the picker and the card feed. With this information, it is possible to determine the correct amount of moisture that should be applied with the wool oil at the picker. And the value of controlling the amount of moisture in a blend should not be minimized. It has a definite influence on yarn strength.

Examples of engineered control are many. In one plant where a moisture meter was used for quick and accurate control, yarn strength was appreciably improved when the moisture content of the blend was adjusted to an optimum point: a 33% change in the amount of moisture applied at the


Total moisture regain desired after oiling, %
30 35 40 45 50
Oil desired, %
2 4 6 8 10
SCALE A
Total moisture regain desired after oiling, %
30 35 40 45 50
Quarts of emulsion required per 100 lb. wool
2 4 6 8 10 12 14
12 14 16 18 20 24 26
SCALE B
Moisture regain of wool before oiling, %
20 15 10 5
SCALE C
Total moisture regain desired after oiling, %
50 45 40 35 30
Oil desired, %
1 2 3 4 5 7 9 6 8 10
SCALE D
20 18 16 14 12 10 8 6 4 2 0
Gal. of water to be mixed with each gal. of oil
SCALE E

RATIO OF WATER AND OIL that should be mixed in preparing a wool-oil emulsion is obtained by starting with the assumed 13% moisture regain before oiling (Scale C), running the line through the 40% regain assumed as desired at 4% oil content (Scale D) so as to give a desired 27% regain at the card. Extension of the line to Scale E shows that the water-to-oil ratio should be 6¼ to 1.

How many quarts of emulsion to apply per 100 lb. of wool is figured by drawing a line from 13% at Scale C to Scale A at the 40%-4% intersection.

The intersection of this line with the 40% total regain on Scale B shows that 13 qt. of emulsion should be applied per 100 lb. of wool fiber in this particular case.

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"A better hand" is only one of the advantages of using Santomerse No. 1 in scouring after dyeing. After vat dyeing in continuous units, for example, acid-resistant Santomerse No. 1 makes less alkali necessary to neutralize the acid carry-over. It reduces crocking because it washes away all unattached dye pigment. It aids in level dyeing and leaves colors free of film and *bright*.

Santomerse No. 1 is an alkyl aryl sulfonate, with a minimum of 40% active ingredient. It is a rapid wetter and penetrant and a highly efficient detergent. Santomerse No. 1 rinses out quickly and thoroughly. It is efficient in hard or soft water, in hot or cold solutions, in acid or alkaline baths.

For information on the use of Santomerse No. 1 in any textile operation requiring a penetrant or detergent, contact the nearest Monsanto Sales Office or write MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 S. Second Street, St. Louis 4, Missouri.

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picker brought more than a 12% increase in yarn strength in the spinning room process.

Use of Nomographs

A second example of the contributions of engineered fiber lubrication to efficient mill operation is a nomograph devised to simplify the computations involved in preparing and applying wool-oil emulsions.

The arithmetic involved in determining oil-to-water ratios and the amount of emulsion to be applied per 100 lb. of wool is often so confusing to mill supervisors that they are inclined to "estimate." It has been found that after a period of using the "estimate" method, the emulsion and its application are out of control. Checks of mill-personnel estimates of oil-and-water applications against actual laboratory analyses of emulsion application often show a large discrepancy between the two. The care in making the decision concerning how much oil and water should be applied is negated by lack of attention to the simple arithmetic calculations required.

The nomograph shown above can be used with any wool oil blend to overcome this difficulty. When, through the careful analysis of mill operations there has been established (1) the amount of moisture on the wool blend, (2) the amount of moisture loss between the picker and the card, (3) the total amount of moisture desired on the wool after oiling, and (4) the amount of oil to be applied, the nomograph shows quickly the correct water-to-oil ratio and the correct amount of emulsion to be applied per 100 lb. of wool.

There is then little reason for inaccuracy in the preparation and application of wool-oil emulsions. Moisture can be applied in efficient quantities; oil consumption can be held to the desired economical level.

Continuous PEROXIDE BLEACHING— A Chemical and Commercial Success

By T. E. BELL and N. J. STALTER, E. I. du Pont de Nemours & Co., Inc.

Continuous peroxide bleaching tests made brought to light the following data:

Effect on Whiteness

In the tests run, whiteness varied from a low of 80.3% to a high of 93.0%. While some of this variation resulted from differences in fabric construction, it was mainly caused by variations in the scouring and bleaching process and was especially effected by the concentration of hydrogen peroxide in the bleaching step. When cloth was subjected to an accelerated aging test, it reverted in color; and the aged cloth varied from 74.6% to 85.4% in whiteness. This is equivalent to a whiteness retention of between 88.2% and 98.1% of the original bleached whiteness.

Effect on Fluidity

Fluidity testing is particularly effective in measuring the modification or degradation of the cellulose that occurs in chemical processing. In our tests we found no cases where fluidity exceeded the limit of 10, which is generally accepted as the point at which chemical degradation sufficient to affect the tensile strength of the fabric begins to be apparent.

Effect on Absorbency

After singeing, desizing, and caustic scouring, the absorbency of the fabrics tested varied from 0.4 sec., which is extremely good, to about 300 sec., which can be considered poor. Following the perioxide-bleaching treatment, these samples were again tested and showed a variation in absorbency from 0.3 to 11.3 sec. It was noted that one sample which had an absorbency of 0.4 sec. improved further during the bleaching process and had a final absorbency of 0.3 sec., whereas two other samples were slightly less absorbent after the bleaching step than after the caustic step. The average of the 16 samples tested after bleaching was 2.98 sec., which is well within the limit of 5 sec. that is considered satisfactory.

Effect on Non-Cotton Content

The conclusion we have drawn from these analyses is simply that almost any desired degree of purification can be obtained in the continuous peroxide-bleach process without adversely affecting the fabric as measured by the fluidity values previously reported.

Effect on Oils, Fats, Waxes

The oil, fat, and wax values obtained on gray cloth, desized cloth, caustic-treated, and bleached cloth ran from an average of 0.82% to 0.24% peroxide bleached. The gray cloth average is 0.82%, the high value 1.15%, and the low value 0.44%. The cloth after desizing has an average of 0.77%, indicating, as might be expected, that desizing and gray-souring operations have little effect upon waxy components. The cloth after caustic scouring has an average value of 0.43%, or about 50% less than the original gray value. This, of course, is to be expected.

The same fabric after the peroxide treatment had an average value of 0.24%, a high of 0.55%, and a low of 0.01%. An unusual conclusion may be drawn from the wide variation in results. Samples 3, 4 and 5, which had the extremely low values of 0.02%, 0.01%, and 0.02% respectively, were enzyme-desized and gray-soured. The rest were enzyme-desized only.

It is possible that either (1) the souring operation actually conditioned these waxy impurities so that they were more easily affected by subsequent operations, or that (2) the analytical procedure used measured more than just oils, fats, and waxes in the samples that were not gray-soured.

Effect on pH

From an analysis of the results it appears that the pH of the cloth after bleaching is somewhat higher than has generally been considered desirable.

It is well known that the presence of alkali in bleached goods will cause yellowing during the drying operation. An examination of several samples with pH values after bleaching between 9.5 and 9.9 showed that their whiteness-retention figures were on an average lower than those of any of the other samples tested. However, the pH value of the bleached samples is not the only factor that influences the whiteness-retention values since other samples with pH values of 6.7 and 6.9 had whiteness retentions of 91.3% and 93.4%. These figures compare with the over-all average of 93.0% retention for all the samples tested.

It can be concluded from the pH tests that good results can be obtained if bleached cloth is washed to give a pH value of about 8.5%.

Average Cloth Characteristics Found by Tests

	Gray	Scoured	Bleached
White	...	...	86.6
White (aged)	...	...	80.5
% Whiteness Retention	...	...	93.1
pH of Water Extract	...	9.3	9.5
Fluidity	2.2	2.9	5.3
Absorbency (in seconds)	...	...	3.0
Non-Cotton Content	9.9	0.99	0.38
Oils, Fats, Waxes	0.82	0.43	0.24

EFFECT OF CONTINUOUS PEROXIDE BLEACHING on cotton fabrics is shown in the above table. Figures are averages of all tests made.

Philadelphia Reports

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>
> "We feel that Mitin represents a basic improvement in the production of woolens that is certain to become a 'must'. Customers will insist upon Mitin Mothproofing when they discover how effective it is in ending the bothersome moth problem. *We're anxious to install as many Mitin Mothproofed lines as we can, and the sooner the better.*"

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How Much DETERGENT Does Cotton Cloth Need?

By L. H. FLETT, L. F. HOYT, and J. WALTER
Natl. Aniline Div., Allied Chemical & Dye Corp.

Surface-active agents, such as detergents, are used for many purposes, some of them to achieve opposite results. They are used, for example, as emulsifying agents and de-emulsifying agents, foaming and de-foaming agents, penetrating and washing agents. Also, in some cases, desired results have not been obtained because too little or too much detergent was used.

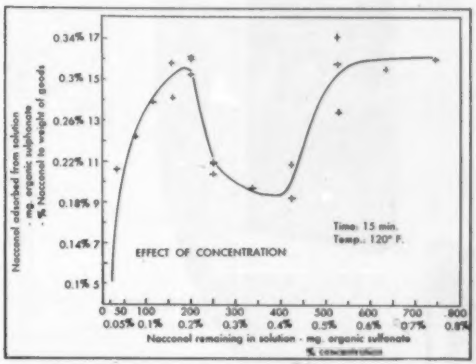
The accompanying graphs of test results explain some of these peculiarities.

In use, a synthetic detergent is somewhat like a fugitive dyestuff. The rate of adsorption is increased by stepping up temperature, bath concentration, and time of exposure and by the addition of salt. When exposed to fresh water, most of the detergent is washed away although traces of it remain.

Mills use detergents for a number of purposes and in a number of processes. How much to use can be determined, of course, only in accordance with the conditions of processing and the purposes for which the detergent is used.

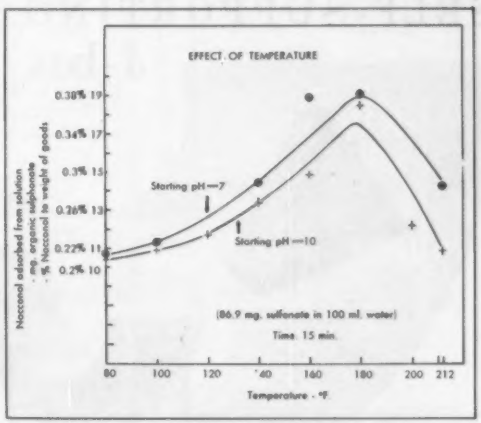
The accompanying graphs clearly indicate the effect on detergent adsorption of concentration, temperature, pH, and time.

Test samples in each case consisted of 5 gm. of cotton sheeting in 100 cc. of solution, giving a liquor-to-cotton ratio of 20 to 1. Naccanol NR was the agent used. In these tests, the Naccanol is expressed as pure organic sulfonate. The actual concentration would be 2.5 times the amounts given.

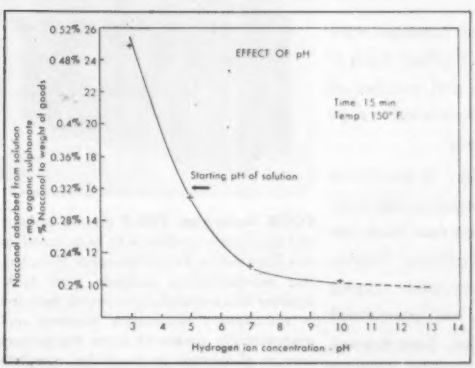

EFFECT OF CONCENTRATION
Time: 15 min.
Temp.: 120° F.
Naccanol adsorbed from solution
mg. organic sulphonate
% Naccanol to weight of goods
Naccanol remaining in solution - mg. organic sulfonate
% concentration

LOW ADSORPTION is obtained at low concentrations of detergent in the liquor. With a concentration of about 0.02% Naccanol, the cotton adsorbs about 0.1% of its weight.

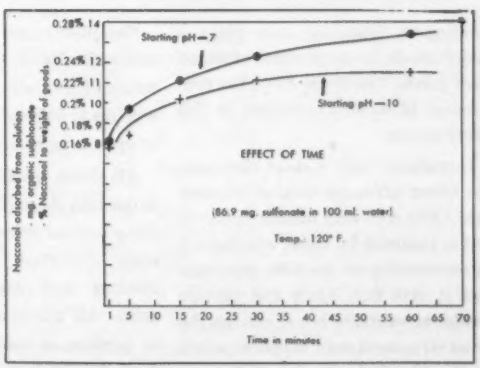
Adsorption increases with heavier Naccanol concentration until about 3% on the weight of the goods is obtained at a concentration of about 0.2% Naccanol. Then adsorption decreases, reaching a low of about 0.19% at 0.4% Naccanol concentration. It requires 0.5 to 0.6% concentration to reach the 0.3% adsorption again.



INCREASING TEMPERATURE from 80° F. to 180° F. increases adsorption from about 0.22% on the weight of the goods to about 0.38%, with a starting pH of 7. As temperature increases beyond 180° F., adsorption falls off sharply, reaching almost 2.8% at the boil.



AN ACIDIC BATH greatly increases the detergent adsorption by the cotton goods. At pH 7, about 0.22 Naccanol on the weight of the goods is adsorbed. As pH decreases toward pH 3, adsorption increases toward 0.5% on the weight of the goods. As pH increases from 7 to 10, adsorption falls off slowly from 0.22% to slightly more than 0.2%.



THE FIRST FEW MINUTES the cloth is in the bath, adsorption takes place at a fast rate as time of exposure is increased. At pH 7, the cloth picks up about 0.16% Naccanol on the weight of the cloth during the first minute. In 5 min., adsorption is almost 0.2%; in 15 min., about 0.22%; and in 30 min., about 0.25%. After an hour, adsorption reaches about 0.27% and still does not level off.

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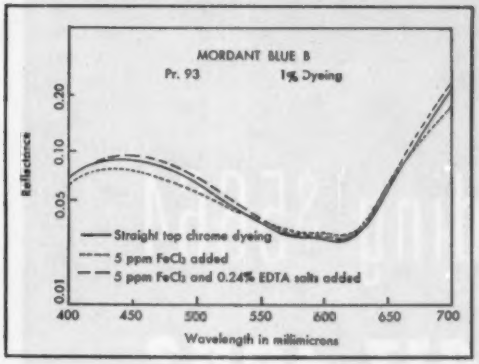

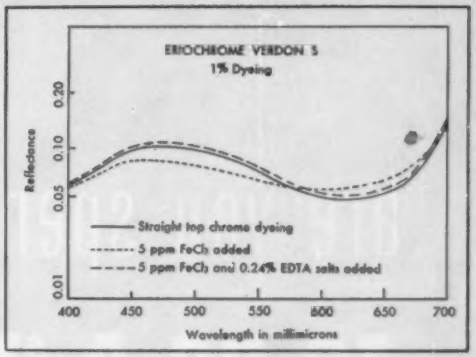

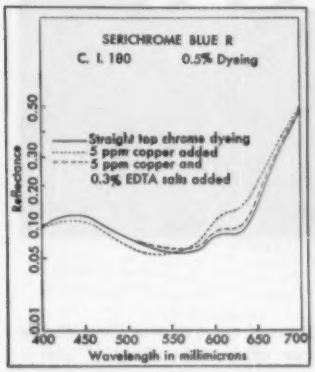

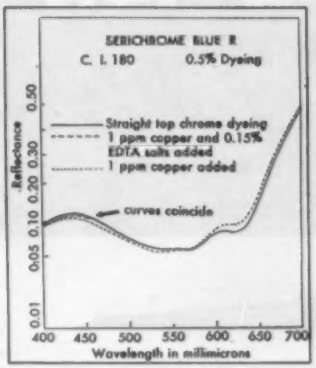

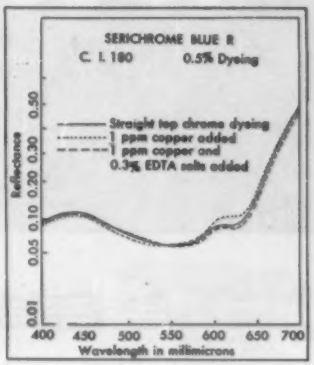

COMPLEXING AGENTS
Remove Undesired Metal Ions

By JOHN J. SINGER, Borsworth Chemical Co.

Metallic ions that interfere with wet processing are always present when untreated water is used. Calcium and magnesium, present in "hard" water, react with soap to cause gummy, sticky insoluble compounds. Iron, copper, zinc, and other metals react with dyestuffs and interfere with dye shades. In peroxide bleaching, copper and other metals speed decomposition of the liquor. In mercerizing and kier boiling, iron causes stains.

The sodium salts of ethylene diamine tetra acetic acid have proved useful in complexing these metallic ions to neutralize them in wet processing. (Because of the lengthy name of these products, they will be designated here as EDTA salts).

Kier Boil

When cotton cloth is boiled in a 3 to 5% caustic solution, iron present in the bath is precipitated on the cloth and may cause stains or holes. An EDTA salt will remove this problem by complexing and dissolving the iron compounds. The iron, now present as a stable complex compound, is removed in the rinse.

Under normal conditions, a salt concentration of 1 to 500 (1 gal. salt to 500 gal. caustic solution) will remove all the iron present in the bath. Since the exact amount of iron present is hard to determine, a good practice is to start with the 1 to 500 concentration and reduce the concentration by small amounts until the exact strength needed is determined. A margin of safety should be allowed for normal iron-content variation.

While the salt will not attack iron, it will dissolve rust and residues of iron corrosion. For this reason, larger amounts of the salt may have to be used until all such deposits are removed. When the equipment is clear, further reductions of the amount of salt used may be possible.

Other uses for the EDTA salt in caustic solutions to neutralize iron are mercerizing, caustic-recovery systems, J boxes, etc.

Bleaching

EDTA salts can be used in peroxide bleaches to extend the life of the peroxide, since peroxide does not oxidize them.

In ordinary stream bleaches of cotton yarn, about 0.05% concentration of EDTA salts reduce silicate concentration to 0.65%.

A similar concentration of the salts will remove most, if not all, the magnesium and calcium salts that form silicate scale on peroxide tanks. Any copper that may be present will also be inhibited.

Dyeing

The effect of metallic ions on dyestuffs is well known. If such ions are present, they will react with the dyestuffs to form compounds that have different physical and chemical properties from the dyestuffs. Dyeing, of course, will be off-shade.

The accompanying charts show dyetest results when metal alone was added to the bath and when metal and EDTA salts were added. These charts show (1) how metal can change the behavior of dyestuffs and (2) how EDTA salts can neutralize the effects of the metals on dyeing.

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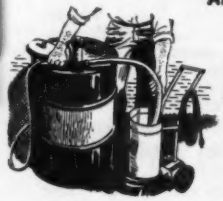
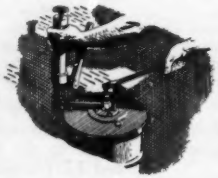
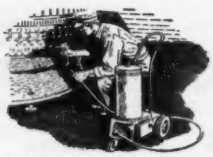


1. In transferring lubricants . . . cuts man hours 63% for every 100 pounds transferred. No mess, no contamination.



2. In loading grease guns . . . saves 3¾ man hours for every 100 pounds of lubricant loaded into hand guns.



3. In applying lubricants . . . saves up to 23.9 man hours for every 100 pounds of lubricant applied to bearings.

FREE! Valuable booklet— "11 Ways to Cut Production Cost"

Simply attach this coupon to your letterhead and we'll include facts on the new Alemite Oil-Mist System, too—OIL-MIST atomizes oil into mist, circulates it to bearings under pressure. Increases life of bearings as much as 17½ times.

ALEMITE, Dept. J-121
1850 Diversey Parkway, Chicago 14, Ill.

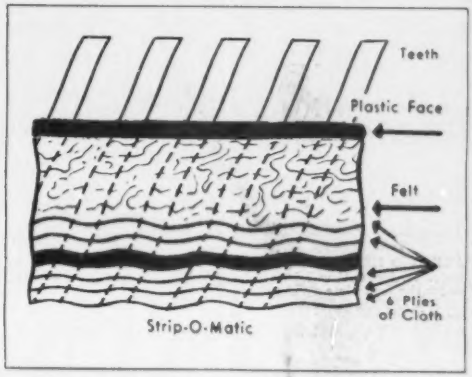
Name .....

Company .....

City ..... State .....

TEXTILE Equipment NEWS

Strip-O-Matic Clothing Now Made For Cotton and Fine Wool



STRIP-O-MATIC CLOTHING has long, narrow teeth with no knee. Absence of the knee and use of the plastic face helps reduce entrapping of fibers.

THIS CARD CLOTHING (Strip-O-Matic) has been running 48 hr. continuously on wool fleece and is still relatively free of trapped stock.

The use of Strip-O-Matic card clothing, a development of the Benjamin Booth Co., Philadelphia, Pa., that permits carding virtually without stripping, has now been extended for use with cotton and finer counts of woolen and synthetic yarns. Originally introduced for carpet work and other heavy yarns, this straight-tooth clothing is now offered in 12 numbers as opposed to eight previously.

Included in the new sizes are fillets with 408 and 456 points per sq. in. The 456-points size (the finest offered) Strip-O-Matic is equivalent to 480 points per sq. in. in conventional clothing. The reason stated that Strip-O-Matic can have fewer points yet do the same work is that the open design of the teeth actually gives more points transversely while it eliminates longitudinal points.

This newly designed fine Strip-O-Matic clothing is now being used successfully in the carding of cotton on pilot production runs. Successful installations have been made for cotton, wool, synthetic, and blended yarns during the past year. Stripping is reported to be reduced by 50 to 500%.

In carding nylon, rayon, and other fine synthetics, when natural oils can be eliminated, it is said to be frequently possible to run without any stripping. In carding natural fibers, runs between stripping are very substantially increased.

Another recent improvement in the new clothing is the substitution of a new and stronger plastic face, together with new foundation of impregnated felt that not only provides greater tensile strength but far greater support for the straight shank teeth used.

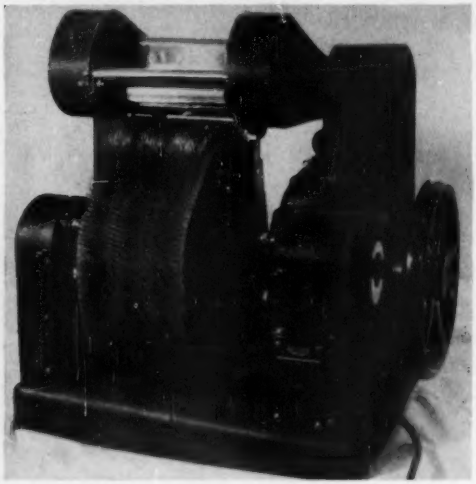
Portable pH Meters Are Compact, Rugged

Battery-operated pH meters that are said to be highly accurate have been developed by Fisher Scientific Co., 717 Forbes St., Pittsburgh, Pa. Routine work with the new units is said to be accurate within $\frac{1}{10}$ of pH unit.

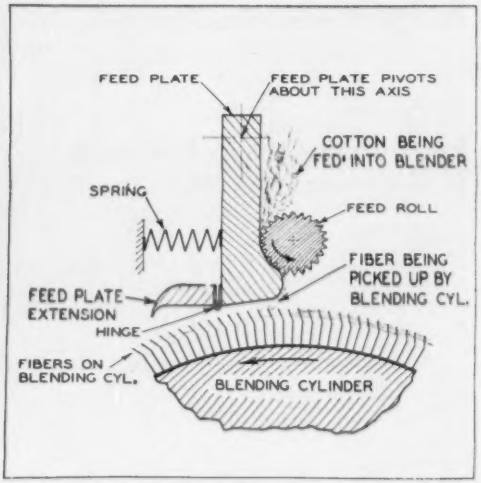
A check pointer is used as a reference mark to observe any drift in the instrument. The unit also has a range switch, temperature control, and standardization control. A humidity indicator shows the condition of the desiccant in the instrument case.

Two models of the new meter are available—N-1 and N-2. Both operate for less than 2¢ per hr. and warm up in less than 10 sec. Both are supplied with buffer solution, KCL solution and crystals, cleaning tissue, glass beaker, electrode holder, reference electrode, and the new Beckman glass electrode. Model N-2 also has a thermometer and plastic bottles for water and buffer.

Mechanical Cotton Blender for Testing Laboratories



COTTON SAMPLES for testing can be made ten times quicker with this new mechanical blender developed by the U. S. Dept. of Agriculture.



ADJUSTED HERE FOR SHORT-STAPLE cotton, the machine is adjusted for longer than 1-in. cotton by folding the feed-plate extension under the feed plate.

Effective blending of cotton samples is said to be assured with a new machine developed by the Cotton Branch, Production and Marketing Administration, U. S. Dept. of Agriculture, Washington 25, D. C. The blender was designed to handle a 10-g. sample, and the new method takes about an hour to make four samples. Hand methods take about ten times as long.

Principal part of the motor-driven mechanical blender is an adjustable feed plate in combination with a fluted feed roll that feeds a sample into a rotary blending cylinder covered with stripper-wire clothing. The feed plate extends under the feed roll, its nose projecting toward the blending cylinder. An extension plate, hinged to the bottom of the feed plate, provides a means of adjusting for long-staple cotton (over 1 in.).

Surface-speed ratio of the feed roll to the blending cylinder is about 1 to 135. This means that fibers in each 1-in. length of bulk cotton will be distributed at various positions along 135 in. of the surface of the blending cylinder. Maximum blending of a sample, without fiber damage, can be obtained in three passes through the machine.

The mechanically blended samples provide a suitable source of test specimens for these laboratory tests: array length, fineness and maturity, Pressley strength, Fibrograph length, Micronaire fineness, microprojector maturity, and nep count in raw cotton. The blender can also be used to blend subsamples into a composite bat.

Higher Production in Same Space With New Slasher Dryer

A combination cylinder and hot-air slasher dryer has been developed by West Point Foundry & Machine Co., West Point, Ga. Production rate of the new dryer is said to be higher than a conventional two-cylinder dryer section, yet the Cyl-Air, as it is called, occupies no more space.

Cyl-Air uses two cylinders (5 ft. and 7 ft. diameter) and centrifugal blowers within insulating panels. The cylinders have dished heads to eliminate the usual through-type stay rods. Stainless-steel covers are welded to the dished heads for operating pressures up to 22 psi-ga.

Air is heated by three double-row, finned-type, steam-heating coils designed for pressures up to 200 psi-ga. A triple-unit centrifugal fan circulates about 10,000 cfm. of hot air within the dryer enclosure. Air is recirculated to increase thermal efficiency. Inlet and outlet dampers regulate recirculation.

Asbestos-type insulating panels enclose the entire assembly. The high room temperatures usually associated with cylinder dryers are lowered considerably.

The blower delivers heated air to a nozzle chamber above the yarn line between the size box and the 7-ft. cylinder. The wet yarn is thus partially dried before it reaches the first cylinder. The yarn can also be divided before entering the enclosure and thereby improve splitting at the head end.

Dimensions of the dryer are: height, 10 ft. 10 in.; width, 6 ft. 1 in.; length, 12 ft. 9 in. Approximately 20 yd. is required to thread this dryer as compared with 27 yd. for a dryer with two 7-ft. cylinders and one 5-ft. cylinder. Production is also said to be higher than that delivered by the three-cylinder dryer.

SERVING THE TEXTILE INDUSTRY SINCE 1899

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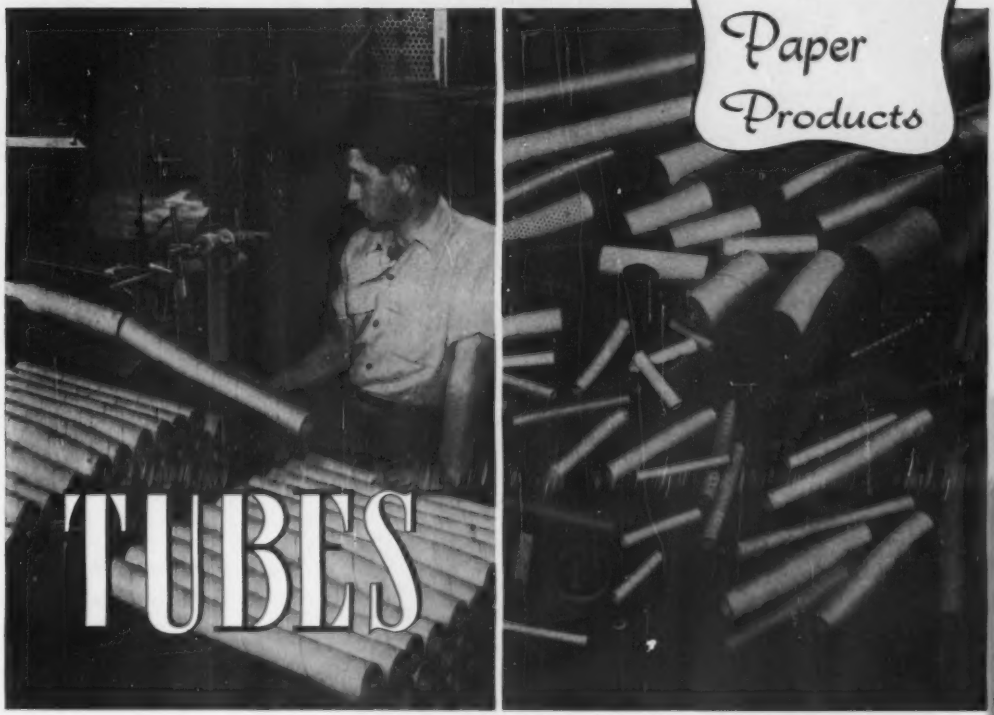

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SONOCO makes spiral, parallel and convolute tubes for all manner of textile uses in any practical I. D., wall thickness or length. Tubes can be treated, printed, lacquer tipped, perforated, notched or scored. They are available in colors and with a variety of surfaces, including ground, polished, flocked or embossed. Our Technical Service Department will work with you on any specifications required to meet your particular needs.

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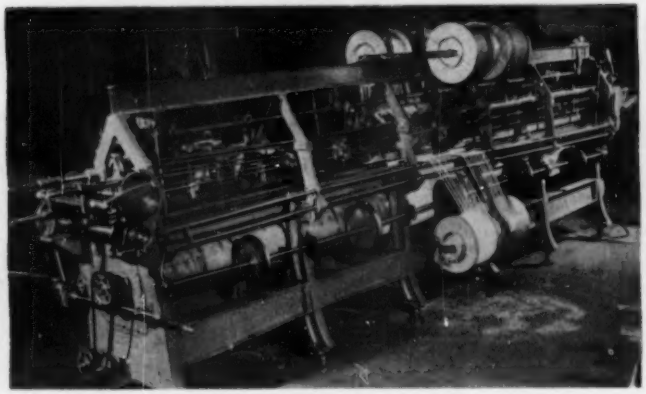
For more information, write direct or use Reader Service post card.

Cidega Machine Produces Knitted Pile Carpets



200-IN. KNITTING LOOM for pile-fabric rugs runs 70 courses per min. and has a production rating of 16 to 20 linear yd. per hr., depending on the yarn size. Height is 6 ft., width 4 ft., and over-all length 21 ft.

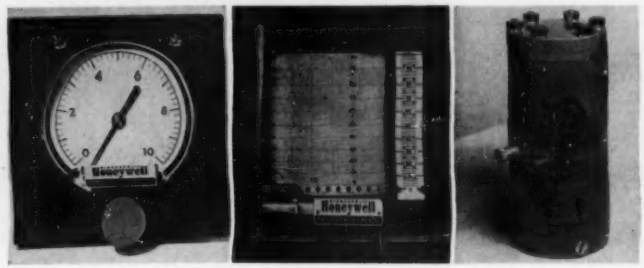
A ball-bearing-equipped flat-bed warp-knitting loom for the manufacture of pile rugs of any type of fiber and in any yarn size or ply has been put on the market by Cidega Machine Mfg. Co., Inc., River Edge, N. J. The machine's production, at 16 to 20 yd. per hr., is cited as up to four times as fast as that of similar woven rugs.

The knitting-loom lateral bars are 200 in. long over-all, so that fabric up to 180 in. finished can be knit. There are five needles to an inch. The creel above the frame is arranged to take one or two beams for the pile yarn, one beam for the backing yarn, and one beam for the warp yarn. An electric warp-stop motion on the warp yarn is "standard"; while stop motions on the back, beam equipment, pattern chains, and thread guides are listed as available accessories.

The frame is cast iron; the drives, shafting, and gauge and weft bars are all-steel. A V-belt drive from a 3-hp. 1,750-rpm. motor connects with a 10¼:1 speed reducer so that cumbersome counter-shafting has been eliminated.

The 200-in. machine is priced at less than $15,000 and is available for three months delivery. Shorter-width machines can be arranged for.

New Controller Fits Into Tel-O-Set System



THESE THREE MAKE A TEAM—indicator, recorder and controller.

A new instrument that provides sensitive control of flow, temperature, pressure, liquid level, and other process variables has been developed by Minneapolis-Honeywell Regulator Co., Wayne & Windrim Aves., Philadelphia 44, Pa. The device, the Tel-O-Set controller is for use with differential converter, indicator, and recorder.

The controller works on the pneumatic-balance principle, which eliminates friction and lost motion. Two types are available—the fixed proportional band and the adjustable proportional band. Except for manual adjustments of reset on the fixed-band unit, and reset and proportional band on the adjustable-band unit, both controllers operate entirely in response to pneumatic signals.

The fast-response, pneumatic-balance unit responds to differences between the two transmitted air pressures it receives—one corresponding to the measured variable and the other to the set point. Diaphragm movements in the controller adjust a sensitive flapper-nozzle combination. Air output from a pilot relay is used to adjust the control valve and to modify the response of the controller itself. The controller continues to readjust the output until the measured-variable pressure is equal to the set-point pressure.

Truck Attachments Used As Forks or Side Clamps

THE MASTER UNIVERSAL CLAMP, designed to fit the line of Spacemaster gasoline and electric fork trucks, has been developed by Lewis-Shepard Products, Inc., 192 Walnut St., Watertown 72, Mass. When lifting arms are used as forks, loads up to 48 in. long and up to 1,700 lb. in weight can be handled. When used as side-clamping arms, the attachment can lift up to 1,400 lb.

Wear Resistance

Consider the amount of resistance a needle must withstand — from wear, from stresses. That is why every step in the manufacture of Textile Spring-Beard Needles is carefully calculated to give you needles that are outstanding for wear hardness and resistance.

Wear resistance is only one of the advantages you get from Textile's quality controls — automatic and electronic. You get needles that are better — in performance and in profits.

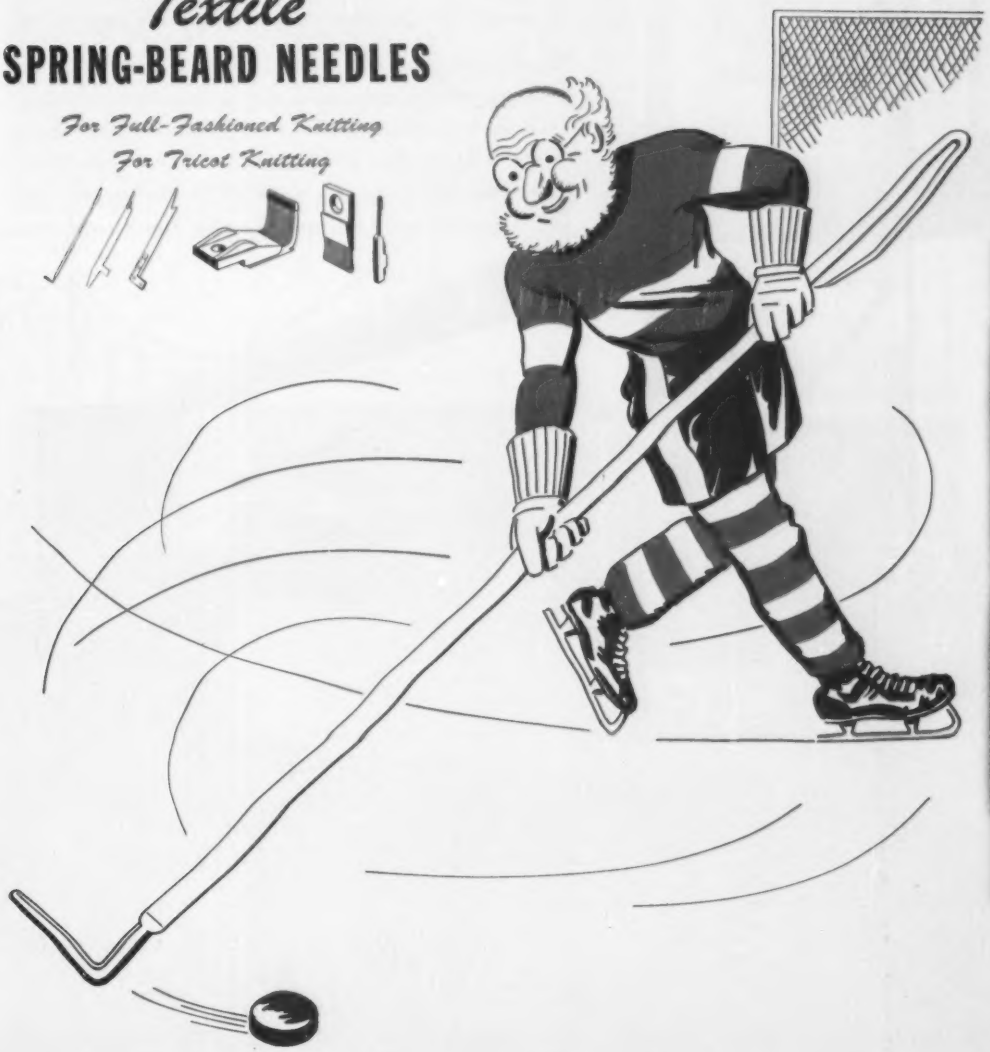
TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full-Fashioned Knitting

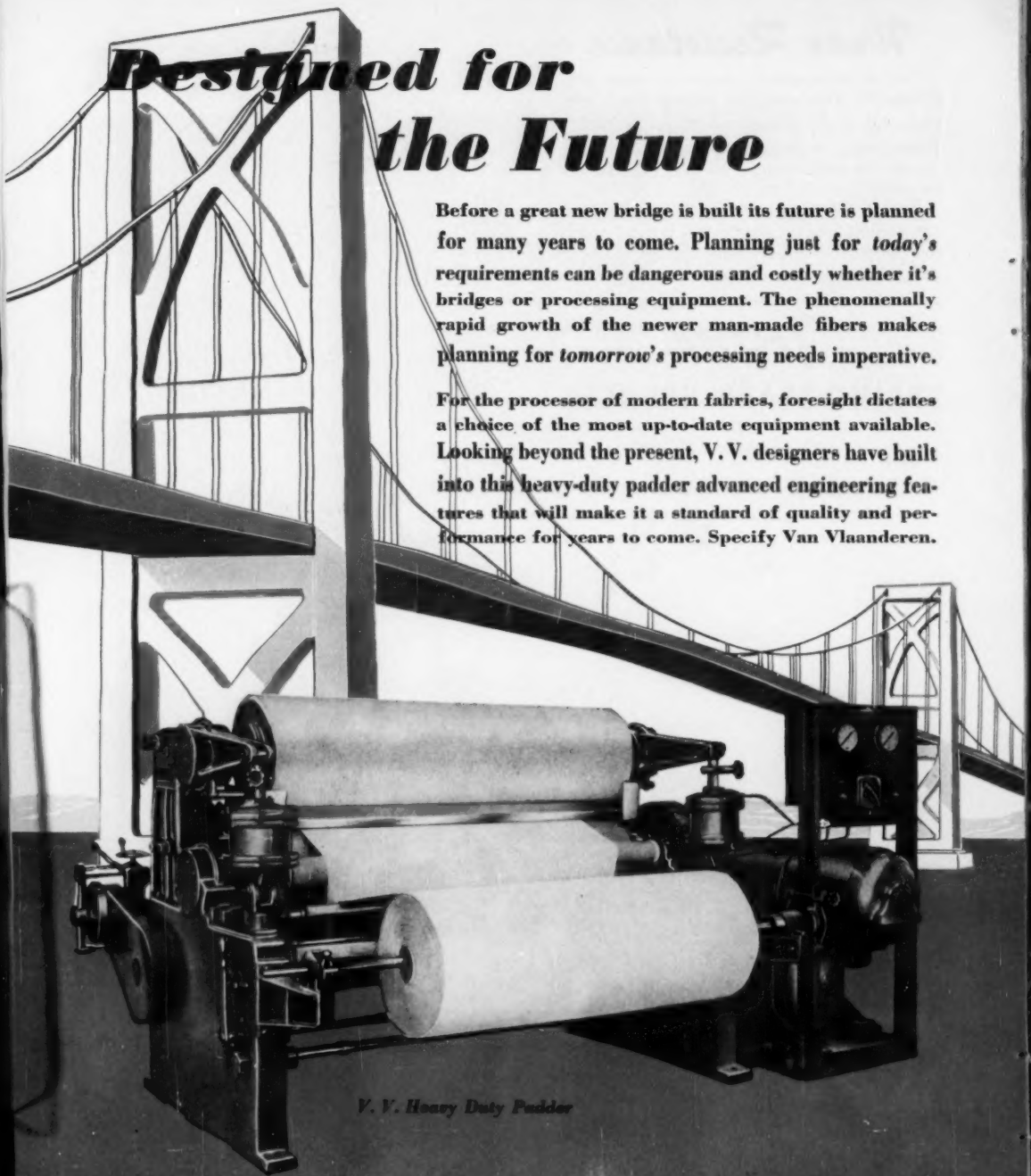
For Tricot Knitting



Designed for the Future

Before a great new bridge is built its future is planned for many years to come. Planning just for *today's* requirements can be dangerous and costly whether it's bridges or processing equipment. The phenomenally rapid growth of the newer man-made fibers makes planning for *tomorrow's* processing needs imperative.

For the processor of modern fabrics, foresight dictates a choice of the most up-to-date equipment available. Looking beyond the present, V. V. designers have built into this heavy-duty padder advanced engineering features that will make it a standard of quality and performance for years to come. Specify Van Vlaanderen.



V. V. Heavy Duty Padder

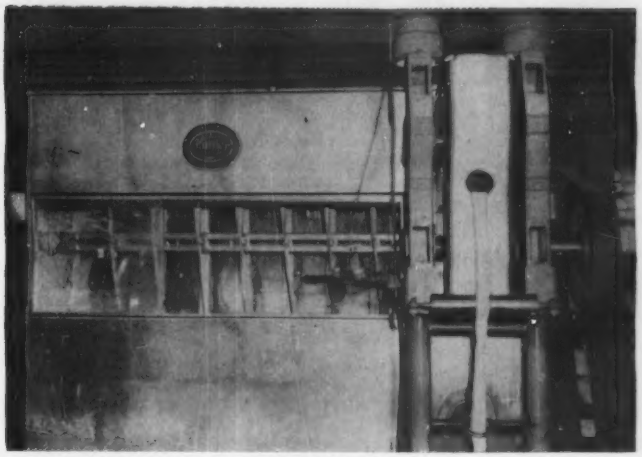
VAN VLAANDEREN

Van Vlaanderen Machine Company, 370 Straight Street, Paterson 3, New Jersey, U.S.A.

Southern Representative: Parrott and Ballentine, 610 South Carolina National Bank Bldg., Greenville, S. C.

World's largest manufacturer of machinery for processing modern fabrics

Air-Pressure Roll Loading for Textile Machinery



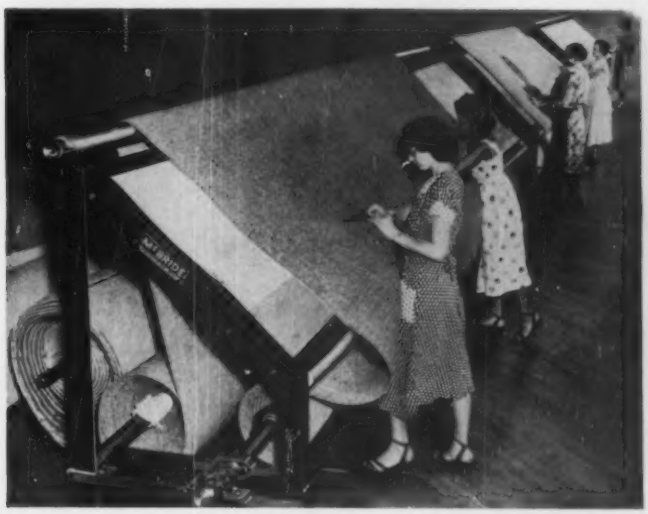
PNEUMATIC CYLINDERS of new type are used for automatic roll loading on a Hunter Flex-reel washer.

A new type of air cylinder called the Bendix-Westinghouse Rotochamber has been announced by Bendix-Westinghouse Automotive Airbrake Co., Elyria, Ohio. These units have recently been adapted by the James Hunter Machine Co., for use on its line of textile machinery.

The manufacturers claim many advantages over the conventional type of air cylinders in that it is light in weight, requires no lubrication, can use unfiltered air, and possesses long diaphragm life. Tests are said to show no diaphragm failures after up to 10,000,000 reversals.

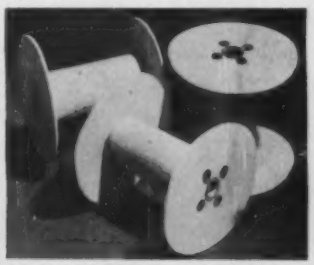
The unit is reported to be ideal for application to textile machinery because of its low cost and maintenance, its availability in a large range of sizes, and its ability to operate at any pressure up to approximately 115 psi. The largest unit made at the present time, Type 50, has a maximum stroke of 4 in.

Carpet-Inspecting Tables Eliminate Handling



POWER-DRIVEN INSPECTION and mending tables for carpet have recently been developed by Edward J. McBride Co., Inc., Philadelphia, Pa. These tables place the work directly in front of the operator and eliminate the problem of individual handling of a carpet during inspection with resultant saving in fatigue of the operator. The direct time saving made possible by this unit is 50%, according to reports from the first installations that were made. In subsequent installations it is anticipated that greater savings can be accomplished where plant conditions permit more thorough use of the mechanized materials-handling features included in the McBride design.

Plastic-Headed Wooden Spools Will Not Mark Off

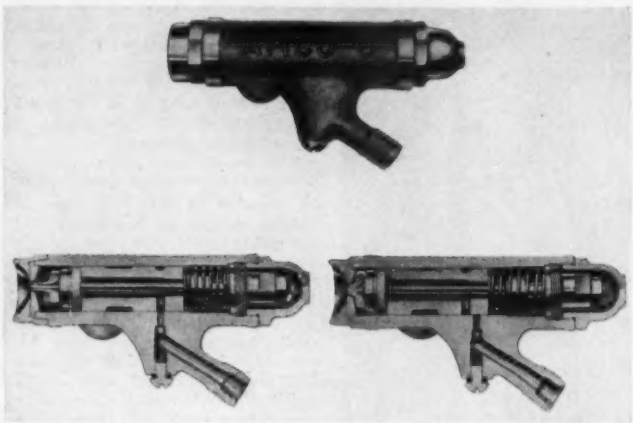


PLASTIC HEADS with impact strength greater than magnesium give high durability to rough handling.

A new line of spools with plastic ends screwed to a wooden core has been developed by The Dynakon Corp., Cleveland 3, Ohio. The spools are said to resist rough handling and to be free from the marking-off characteristics of some metal spools.

Impact strength of the plastic heads is said to be several times that of magnesium, reinforced phenolic, or fiber. The spools are dimensionally stable, it is claimed, and will not bend. Water absorption is low, and moisture will not warp the spools. The spools are available in any color.

New Self-Cleaning Atomizer Improves Humidification



FEWER PARTS and automatic self-cleaning mean less maintenance for this new humidifying head.

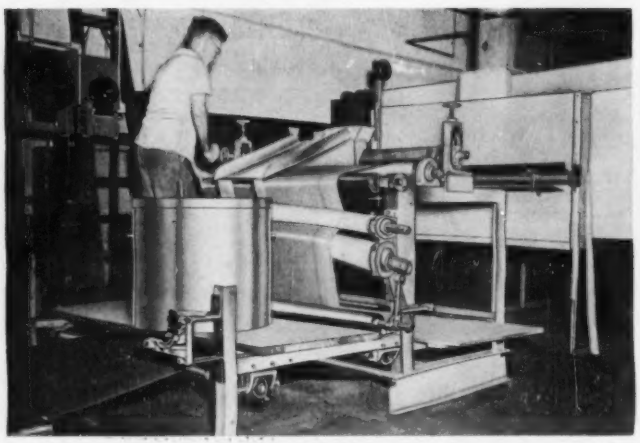
Superior spray quality combined with economy in air use distinguishes the new AMCO No. 6 automatically self-cleaning atomizers that have been developed by American Moistening Co., 260 W. Exchange St., Providence, R. I.

The new atomizer is said to be easier to maintain, more rugged in construction to withstand accidental abuse, and resistant to erosion, corrosion, and mechanical wear.

Each time the atomizers are shut off, either manually or by the automatic humidity controller, motion of the water-jet carriage moves the atomizer's center pin through its self-cleaning cycle. Both air and water orifices are cleaned.

This self-cleaning atomizer conforms to standard specifications and is interchangeable with Amco atomizers Nos. 5 and 4 and many others.

Slack-Selvage Eliminator Improves Coating Operation



ELIMINATION OF UNEVEN COATING and slowdowns in production were accomplished at Interchemical Corp., Coated Fabrics Div., by use of slack-selvage eliminator before coating head.

Use of the Mount Hope slack-selvage eliminator in fabric coating has been announced by Mount Hope Machinery Co., Trenton, Mass.

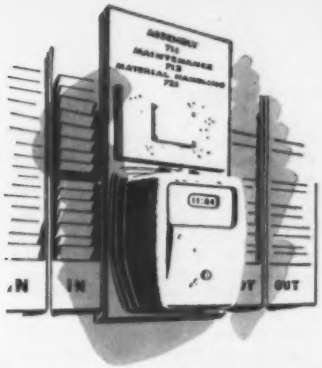
Slack selvages are a serious problem in coating, since they cause uneven coating, slowdowns in production, and second-grade material. The Interchemical Corp., Coated Products Div., Buchanan, N. Y., was faced with this problem in coating nylon to make poncho material for Government contracts. This problem was quickly solved by incorporating a Mount Hope slack-selvage eliminator ahead of the coating head.

The Mount Hope slack-selvage eliminator consists of a brass spring-tension-pivoted idler roll that takes up the slack on either selvage of material being handled and two "free wheeling" expanders that spread out and hold the material smooth and flat as it enters the coating head.

New Solvent Developed For Cleaning Spindles

A new solvent type cleaner, Magnus 751, has been developed by The Magnus Chemical Co., Inc., Garwood, N. J., to clean spinning-frame spindles. A cleaning solution made of two parts Magnus 751 to one part water is said to thoroughly clean spindles in a half hour. The spindles are placed in a tank that contains the solution. If a faster rate of cleaning is desired, a Magnus Aja-Dip cleaning machine will do the work in 15 min.

The manufacturer states that the spindles can be left in a solution for longer periods without damage. After they are removed, they should be given a simple water rinse or a rinse in safety solvent.



A BOILER THAT PUNCHES THE TIME CLOCK

Yes — a Cleaver-Brooks Boiler "Punches In" to meet a heavy steam demand — "Punches Out" during low load periods.

Steam costs can eat deeply into profits when steam loads fluctuate — or are intermittent. With a Cleaver-Brooks boiler you are equipped for heavy or light . . . steady or variable loads, operating at full 80 per cent efficiency over the entire working range of the boiler.

You are assured of fuel economy through high heat transfer. *All* Cleaver-Brooks boilers are of the four pass design and the maximum useable heat is absorbed in these four passes before the combustion gases leave the boiler.

Remember the name Cleaver-Brooks if you are considering a change in your present boiler plant. Think about flexibility and get the complete facts about Cleaver-Brooks Self-Contained Boilers — standard models in 15 to 500 HP, 15 to 250 psi, oil, gas, combination oil and gas fired — 80 per cent efficiency.

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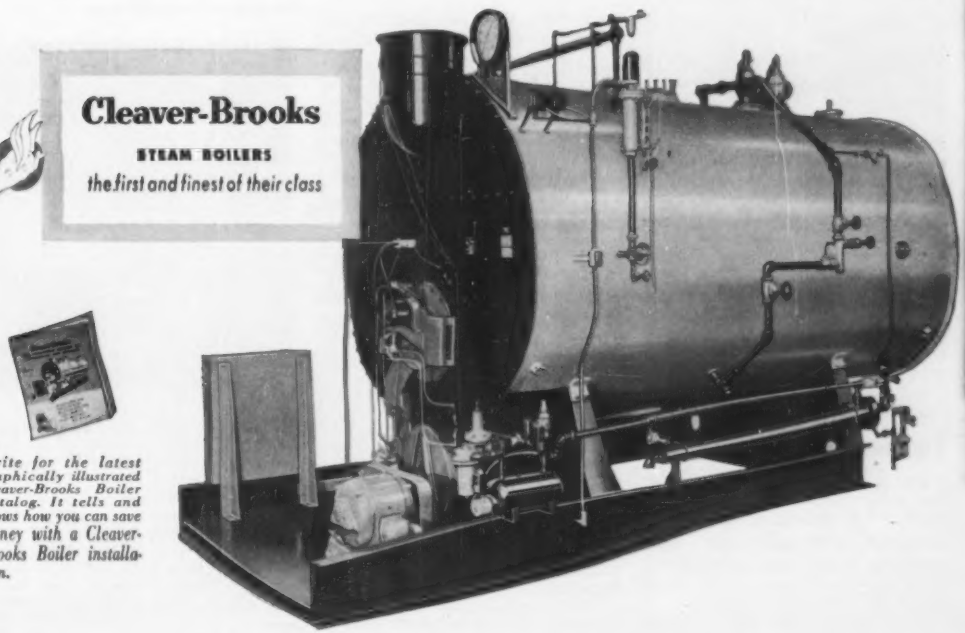
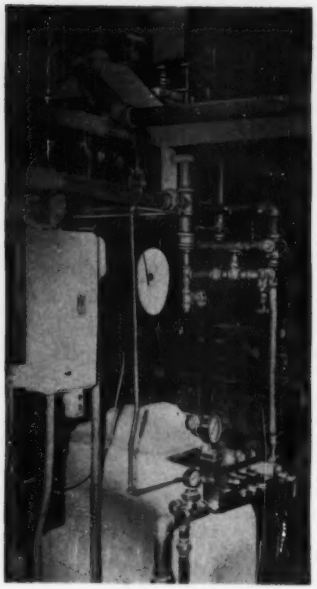
371-M E. KEEFE AVE., MILWAUKEE 12, WIS.
Builders of Equipment for the Generation and Utilization of Heat • Steam Boilers • Oil and Bitumen Tank-Car Heaters • Distillation Equipment Oil and Gas-Fired Conversion Burners

Cleaver-Brooks
STEAM BOILERS
the first and finest of their class



Write for the latest graphically illustrated Cleaver-Brooks Boiler Catalog. It tells and shows how you can save money with a Cleaver-Brooks Boiler installation.

Viscosity of Homogenized Size Measured



A measuring and recording viscometer designed for use with homogenizers preparing warp size has been developed by Norcross Corp., 247 Newtonville Ave., Newton 58, Mass. The instrument measures viscosity of size as it is delivered from the homogenizer, and indicates variations in size—often appreciable in different shipments. Also checked on are possible human errors in preparing the size formula. The recorder is conveniently located where adjustments can be readily made in homogenizer pressure to maintain correct viscosity. Mills are said to report that the viscometer assures uniform sizing.

The measured viscosity is registered on the 24-hour chart providing a permanent viscosity record of all the size prepared by the homogenizer. This is particularly important for night shifts where adequate supervision cannot always be maintained.

UNIFORM SIZE VISCOSITY can be maintained by making adjustments in homogenizer pressure as the viscometer indicates the need.

Dynel Bales Now 400 Lb.

DYNEL ACRYLIC FIBER is now being shipped in 400-lb. bales, Carbide and Carbon Chemicals Co., Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York, N. Y., announces. Increase in bale weight from 350 lb., a result of improved handling techniques, is part of a program to reduce shipping costs. Fiber is shipped to textile mills in corrugated paper cartons and is protected from contamination.

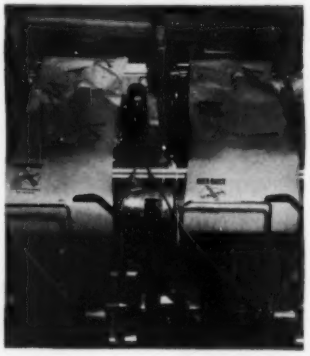
Nylon-Bearing Rolls Eliminate Lubrication

NYLON-BEARING ROLLS can simply be inserted in replacement of steel rolls. No special devices are required.

"Cleandraft" nylon-bearing top rolls that need no lubrication are a new product of Industrial Plastics, Inc., 21 Vernon St., Whitman, Mass. This roll is designed for back and middle lines of cotton spinning and is produced by a new method that integrally molds nylon at ends and center to contact cap bars and saddles. As a result, these rolls give the antifriction advantages of nylon, without any special installation requirements, simply by replacing standard steel shafted rolls with the "Cleandraft." The new molding method has made possible a new low price for these rolls.

The name "Cleandraft" is derived from the fact that no oiling is needed, and cleaner yarn results, as well as the savings in lubricant and lubricating effort. Roll picking and cleaning are also greatly reduced. "Cleandraft" rolls are made for back and middle lines of all standard and long-draft cotton spinning systems, and the usual variety of cotton materials is available.

Rust-Inhibiting Wrapper Protects Machines



TEXTILE MACHINERY shipped by Universal Winding Co. is protected from rust by Vapor Wrapper, a product of Nox-Rust Chemical Corp., Chicago, Ill. Here a winding machine is shown partially wrapped with the material, impregnated with the volatile rust-inhibiting chemical, Cellex. Cellex inactivates moisture in the air surrounding packaged parts and renders it non-corrosive. Parts that will be 12 in. or more from inside walls of the shipping crates are protected as shown here. Remainder of machine receives protection from Vapor Wrapper sheets that line the crate.

Vacuum Impregnation Applied to Textiles

The process of introducing an impregnating agent into a chamber where a high vacuum has been drawn —vacuum impregnation—has been applied to several textile processes by the F. J. Stokes Machine Co., 5500 Tabor Rd., Philadelphia 20, Pa.

In the production of machine-made lace, basting threads are now of cellulose acetate, which is dissolved by impregnation of the lace with acetone in a vacuum chamber. Manual removal of the basting threads was formerly necessary.

The process is also used in the weatherproofing of textile materials.

"Mmm, I see McGillicuddy has discovered for himself that Swift's Vertex is a grand leveling agent!"

When it comes to textiles, *many* successful operators know it pays to call on Swift for the *right* soap for *every* textile need. For dyeing, fulling, scouring, or any other specialized service.

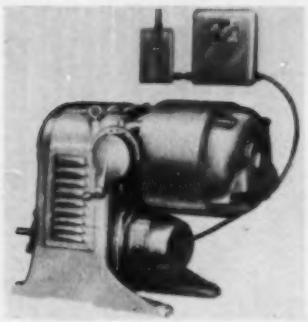
Yes, whatever your soap requirement, you can make a wise choice from the quality soaps offered by Swift's Soap Department. All Swift Soaps combine excellent physical form with proper uniformity of composition. These are most wanted qualities in textile soaps.

If you're faced with a unique, especially tough soap requirement, call on us. Our years of soap-making experience can help you find a soap that fits your particular requirements.

Call SWIFT first for soaps

Listed below are some of Swift's fine soaps. You can order any one of them from Swift's distribution points coast to coast and expect immediate delivery.

Vertex Flakes
557 Flakes
White Ribbon Flakes
Wool Flakes



VARIDRIVE MOTORS now have a Warner magnetic brake.

Magnetic Brake for Motors

Fast, controlled braking of U. S. Varidrive motors is now possible with a new brake developed by U. S. Electrical Motors, Inc., 200 East Slauson Ave., Los Angeles 54, Calif.

The brake, a Warner Type ICB, is mounted directly on the variable-speed shaft to eliminate transmission of the braking action through the belt. Said to be ideal for inching or jogging, the new brake offers constant, shockless, noiseless operation and produces a constantly increasing torque during stopping.

Mechanical movement of the brake is only 1/16 in. Frictional force is controlled by the magnetic action of the brake. A knob-controlled rheostat allows adjustment for installations that require diversified braking torques.

The brake is d.-c. actuated and uses a maximum of 35 w. Power-conversion units are used where a.-c. voltage is supplied.

(Continued on page 224)

NEW *Dyes* AND *Chemicals*

Acid Dye Produces Bluish-Red Shades on Wool

A straight, level-dyeing, fast-to-light acid dye of the anthraquinone type has been developed by General Dyestuff Corp., 435 Hudson St., New York 14, N. Y. The new dye, Alizarine Rubinol R-CF, is said to produce very clear and bright bluish-red shades on wool. It is said to have good resistance to chrome and ability to exhaust adequately on wool and silk from a neutral bath.

Dyeings on wool of this dye range from deep, bright, bluish reds to bright clear pinks, according to the depth. They are said to be characterized by good-to-very-good (5-6) to good (5) fastness to light and by good or better wet fastness. The dyeings are said to be in general reasonably fast to acids, alkalis, stoving, steaming, washing, sea water, and mild fulling. It was developed for use alone or in combination with dyestuffs of similar properties for women's wear, knitting yarns and carpet yarns.

The new dye can be used on wool in all forms from stock to piece goods, normally from an acid bath that contains sodium sulfate and sulfuric acid. It is recommended by the manufacturer also as a shading color for chrome dyeing.

This dye is said to exhaust well enough from a neutral solution that contains only sodium sulfate to be used for shades on the wool of cotton-wool unions. The dye has no practical value for color discharges although it is successfully employed for the direct printing of clear pink shades by the usual acid-dye formulations on wool with good fastness to both light and washing.

Alizarine Rubinol R-CF contains such small traces of copper and manganese that it has been accorded the CF designation and is recommended for goods that are to be rubberized.

New Vat Printing Pastes Give Good Brightness, Fastness

Four improved Calcosol vat-printing pastes are announced by Calco Chemical Div., American Cyanamid Co., Bound Brook, N. J. These new pastes, Calcosol Pink FFWP Paste, Calcosol Printing Scarlet 2BW Paste, Calcosol Printing Scarlet 2GW Paste, and Calcosol Printing Orange RYW Paste, are said to give outstanding brightness and good fastness.

They have been produced to provide printers with non-settling and free-flowing vat colors that will not dry and flake on the sides of drums. These improved pastes are said to have uniformity of quality from beginning to end of the barrel, to eliminate waste from thick deposits on the sides of the barrel, and to eliminate specks from flaked color.

Preservative Protects Fabrics From Micro-Organisms

A new, safe preservative for textiles and other materials subject to attack from micro-organisms has been announced by Dow Chemical Co., Midland, Michigan. The chemical, Copper 3-Phenylsalicylate, is now available in pilot-plant quantities. Expanded production facilities will come into operation soon, according to K. D. Bacon of Dow's technical service and development group.

The new compound has been approved by the Office of the Quartermaster General as an alternate material in U. S. Government specification JAN-D-504. The manufacturer expects wide use of the product to treat fabrics for tents, tarpaulins, and other goods subject to outdoor exposure for both military and civilian users.

The preservative may be applied to fabrics by the standard two-bath process, from an aqueous dispersion, or from a solution in organic solvents. It is said to impart a very light tan color and virtually no odor to treated fabrics.

The compound is reported to be non-irritating and non-sensitizing to human skin and non-toxic to plant life.

Fixatives Developed For Cottons and Rayons

Two new highly active dye-fixing agents, Emkafix R and Emkafix C, are announced by Emkay Chemicals Co., 319 Second St., Elizabeth, N. J. These products are recommended as after treatments for direct-dyed or printed cottons and rayons.

Emkafix R is a viscous liquid that is designed to meet the requirements of excellent fastness to water, perspiration, and hot-wet pressing. It is said to greatly improve fastness to washing with a minimum change of shade or brightness of the direct color. It is also said to be easily applied to direct-dyed piece goods, printed fabrics, and dyed skeins, to prevent migration and bleeding of the dyestuffs.

Emkafix C is a heavy free-flowing liquid that is designed for use when fastness to washing and other specifications normally obtained with vat colors are required.

Spray Printing Improved On Wool Fabrics

A new method of spray printing on woolen upholstery fabrics is announced by Glycerine Information Service, 295 Madison Ave., New York 17, N. Y. In the new method, the fabric is wet out with a suitable agent and sprayed with a dye solution to which this wetting agent has been added. The spraying solution can be prepared from the following formula:

Dyestuff	5-20 g.
Intensifier	150 g.
Water	330 g.
Tragacanth thickening	300 g.
Acetic acid, 40%	50 g.
Solvadine BL conc. (10% sol.)	50 g.
Glycerine	100 g.

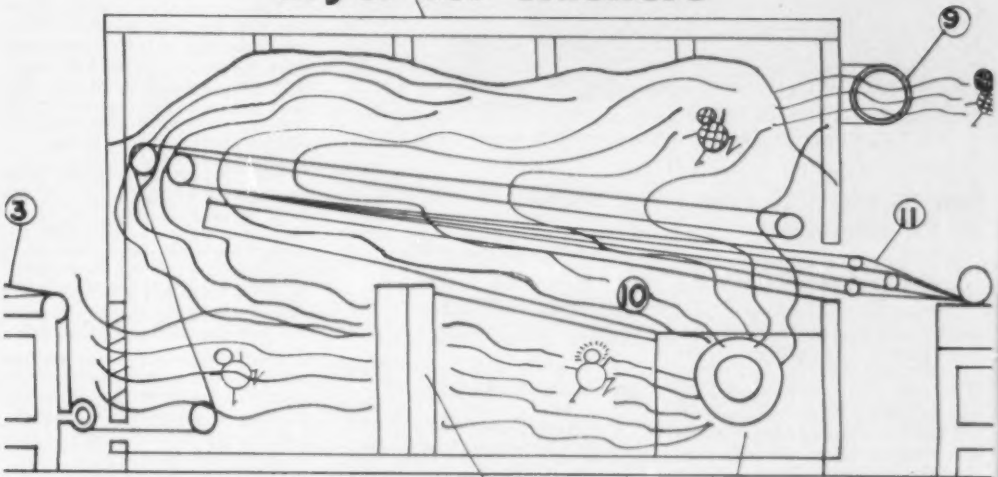
After drying, the prints are steamed for 30 to 50 min. at one-quarter atmosphere pressure to obtain satisfactory rubbing fastness.

Announcing

The Model B

Uxbridge "Gentle-Air"

dryer for slashers



Smaller in Size — Lower in Price

- But capable of producing the same high quality warps at high speeds and lower costs as the Model A.
- The product of 8 years of research, the Model B is designed for cramped quarters where the Model A would not fit, and for mills which do not require the tremendous production of the Model A.
- Same high safety factor as with the Model A — No Explosion Hazards.
- All parts completely accessible for servicing.
- The same low cost, high quality operation.

IRA L. GRIFFIN & SON, Southern Representative
Charlotte 1, North Carolina

BACHMANN UXBRIDGE WORSTED CORP.
UXBRIDGE, MASSACHUSETTS

More warps and Better warps

THIS IS NO. 90 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

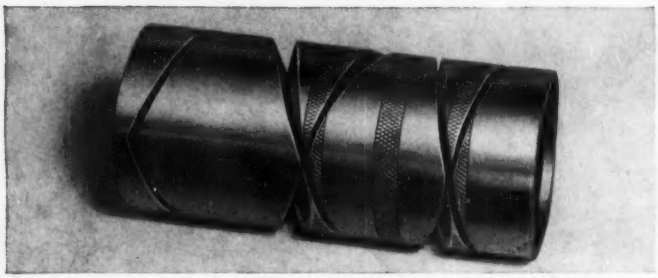


Fig. 1. Cast iron rotary traverse with serrations for use with slick yarn.

HOW TO WIND SLICK YARN ON THE ROTO-CONER*

Winding slick or slippery yarn on drum winders can present a problem.

The winding package on a drum winder is driven by frictional contact between the surface of the package and the driving drum. With slick yarns, insufficient traction is obtained between the smooth roll and the slippery yarn; the result is that the drum cannot revolve the take-up spindle fast enough to maintain the correct relationship between the traverse and spindle speeds. This relationship must be maintained to lay the yarn properly on the cone or tube.

Mills winding such yarns on the Roto-Coner* find that excellent results are obtained by using a knurled metal traverse (Fig. 1).

The light serrations around the circumference of the cast iron traverse offer a tread for the cone to drive upon and thus provide the traction needed to maintain speed.

Knurled cast iron traverses can be obtained with two different groove arrangements: "2 turns, uniform" for tubing, "2½ turns, full-accelerated" for coning.

CHANGING TRAVERSES ON THE ROTO-CONER*

It is fairly simple to change traverses on the Roto-Coner*.

If the traverses to be removed from the traverse shaft have been in use for a long time, a few drops of penetrating oil placed on the screws holding the traverses on the shaft will help loosen any that stick.

Changing traverses can be simplified further by using *new* traverse shafts and bearings. The traverses, traverse shaft and bearings can then be replaced as a unit in each section of twenty spindles. It is necessary merely to remove the bearing caps, retainers and couplings that connect the shafts. The old traverse shaft and traverses can then be removed and stored on a rack as a unit.

Fig. 2 shows a bearing from which the cap has been removed. When replacing this cap, it is important that the retainer (A) and the shield (B) be positioned as shown. The four fingers on the retainer should lap over the outside of the shield to hold it in close to the bearing.

The purpose of the shield is to protect the bearing from lint and dust. Should the shield be so positioned that it is *not* inside the fingers when the cap is replaced, it will be free to ride out on the shaft; with the result not only that it will fail to give protection to the bearing, but may also score the shaft.

The vents in the retainer and the shield should also be positioned as shown in Fig. 2 so that when the bearing is lubricated through the hole in the cap, the oil can seep down into the bearing.

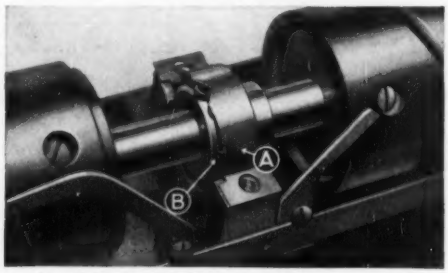


Fig. 2. Traverse shaft bearing with cap removed to show retainer (A) and shield (B).

23.1.3

December, 1951

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

UNIVERSAL WINDING COMPANY

Universal Division

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON

*Reg. U.S. Pat. Off.

LETTERS FROM OUR READERS

Address all communications to:

Editor, *Round Table*, TEXTILE WORLD
330 West 42nd Street, New York 18, N. Y.

Round Table

EARLE MAULDIN

Dear Editor:

I am shocked and distressed to hear the sad news about Earle Mauldin. I know that everyone on TEXTILE WORLD will miss him personally as well as in your work.

Earle was a friendly and useful man who did a great deal of good. I became very fond of him over the years.

My feelings are shared by others in our organization who knew him well.

C. P. WOOD
Lockwood Greene Engineers, Inc.
New York

Dear Editor:

It was very sad news to learn about Earle Mauldin. Please accept my deepest sympathy in your loss.

Earle was very highly regarded and sincerely loved by all his friends throughout the "textile world."

May I also express my feeling as treasurer of the Atlanta Textile Club, of which he was a member.

WILLIAM M. WOODFORD
McCampbell & Co.
Atlanta, Ga.

Dear Editor:

In the years that I knew Earle Mauldin, your Southern Editor, I learned to like and respect him.

It was with deep and sincere regret, therefore, that I learned of Earle's untimely death on October 10. I wish to take this opportunity to express to you and his other associates my deep sympathy.

L. H. DUNCAN
Norfolk & Western Railway Co.
Roanoke, Va.

LAWRENCE, MASS., DILEMMA

Dear Editor:

I enclose a statement from the *Congressional Record* of October 8 as made by Congressman Tom Lane of Massachusetts:

"Mr. Speaker, . . . the city of Lawrence, Mass., is the largest woolen-worsted manufacturing center in the world. . . . The government is calling for more and more production, but the machines and manpower of Lawrence are idling. . . . At present, 25% of the labor force here is out of work.

"Why?

"I intend to ask for a congressional investigation of this dangerous situation, one that will take place immediately and out in the open, let the chips fall where they may.

"I cannot for the life of me understand why the government is giving favored tax treatment to encourage the construction of textile facilities elsewhere while the great plant capacity of Lawrence, backed by the know-how of management and the skill of laborers, is ready and anxious to swing into full production without delay."

JOSEPH R. BRYSON
Washington, D. C.

TEXTILE TICKLES . . . . . *By Edgar Allen, Jr.*

"Absolutely not! I have enough hot air around here as it is!"

"CAN HAPPEN" EDITORIAL

Dear Editor:

I have read with considerable interest your September editorial entitled "It Can Happen in the South."

This is an outstanding piece of editorializing and is one of the most thought-provoking pieces that I have read recently, both from the standpoint of the manufacturer and the standpoint of trade-association personnel.

We shall take great pleasure in calling the article to the personal attention of some key manufacturers among our group.

ROBERT C. JACKSON
American Cotton Mfrs. Institute
Charlotte, N. C.

Dear Editor:

I read and appreciated your editorial in the September issue. It is absolutely true and to the point, and I hope that some of us in the South who have directed our textile plants have realized the dangers you have pointed out.

So far we have had a preponderance of ownership-management in our Southern mills. I attribute a good measure of our growth to that factor.

We face the same danger that Northern

mills encountered when the younger generation moved away from the mills while retaining a large share of ownership and took out in dividends money that should have gone into plant modernization and working capital.

I think this factor is highly important. A man whose living depends on the success of a mill and whose future is tied up with these mills is, in my opinion, more apt to be vitally interested in their success.

THURMOND CHATHAM
Washington, D. C.

Dear Editor:

. . . I am in no position to say that I completely agree with every point in your suggestions. Some of them are matters to be determined on the state and local level.

It seems to me that wise planning now will contribute toward avoiding unnecessary pitfalls. We should be able to profit from the mistakes as well as from wise decisions made by the industry in New England.

The textile industry has a bright future in the South. I am anxious, of course, to see it develop on a sound basis and with as few disruptions and misunderstandings as possible.

JOHN SPARKMAN
U. S. Senator from Alabama
Washington, D. C.

Dear Editor:

We agree with you that there is trouble ahead if the chambers of commerce and textile-mill operators don't get together on a long-range cooperative method.

It seems to me that this matter could be an excellent project for our state organization. As a member of our state board, I will be glad to bring this to their attention.

C. R. STROUSE
Chamber of Commerce
Reidsville, N. C.

Dear Editor:

The editorial is thought-provoking, and the ideas you present should be considered by labor, management, and public officials.

JAMES F. BYRNES
Columbia, S. C.

TEN COMMANDMENTS

Dear Editor:

The other day I ran across a copy of "Ten Commandments of Good Organization," put out by the American Management Association. Having been around textile mills for quite a few years now, in a position to observe many textile executives, I think many mills and textile supervisors would do well to paste these rules on their office walls and in their hats. How happy many lower-rank supervisors would be if they knew the 10 rules would be applied to them! Here they are.

1. Definite and clean-cut responsibilities should be assigned to each executive.

2. Responsibility should always be coupled with corresponding authority.

3. No change should be made in the scope or responsibilities of a position without a definite understanding to that effect on the part of all persons concerned.

4. No executive or employee, occupying a single position in the organization, should be subject to definite orders from more than one source.

5. Orders should never be given to subordinates over the head of a responsible executive. Rather than do this the officer in question should be supplanted.

6. Criticisms of subordinates should, whenever possible, be made privately; and in no case should a subordinate be criticized in the presence of executives or employees of equal or lower rank.

7. No dispute or difference between executives or employees as to authority or responsibilities should be considered too trivial for prompt and careful adjudication.

8. Promotions, wage changes, and disciplinary action should always be approved by the executive immediately superior to the one directly responsible.

9. No executive or employee should ever be required, or expected, to be at the same time an assistant to, and critic of, another.

10. Any executive whose work is subject to regular inspection should, whenever practicable, be given the assistance and facilities necessary to enable him to maintain an independent check of the quality of his work.

CHARLES COLVIN
Charlotte, N. C.

Test Your TEXTILE IQ

▶ **Each correct answer rates 10 points. A total of 70 is passing; 80, good; 90, excellent; 100—you're a genius. Keys to answers are on page 200.**

1. According to a survey sponsored by USDA, it is almost certain that mills can reduce spinning cost by more than:
   a. 2% c. 30%
   b. 10% d. 48%

2. The time required for a complete test of 10 yd. of sliver on a Uster tester is about:
   a. 1 min. c. 20 min.
   b. 6 min. d. 40 min.

3. The heaviest duck that can be woven on Draper Model E and X looms is:
   a. shelter-tent duck c. No. 6 duck
   b. No. 4 duck d. No. 8 duck

4. Homogenized size is reported by mills to:
   a. increase steam consumption c. increase operator efficiency
   b. raise materials cost d. lower quality of warps

5. About how much card sliver can be put in a 12-in. can if high-compression calender rolls are used?
   a. 5 lb. c. 18 lb.
   b. 12 lb. d. 27 lb.

6. If you want softness in a fabric, use:
   a. coarse fibers c. high yarn twist
   b. high sley d. low yarn twist

7. One of the outstanding features of the Pacific evenness tester is:
   a. tests yarn on frame c. 200 yd. per min. material speed
   b. works on mechanical principles d. not affected by moisture

8. If nylon stockings are preset before seaming:
   a. defects are lower c. stitch is looser
   b. efficiency is lower d. defects are raised

9. Hard-topped cement floors are reported to:
   a. be hard on feet c. wear out quickly
   b. require low maintenance d. stay damp

10. Card cylinder bearings should be lubricated every:
    a. day c. month
    b. week d. three months

if it's IRON, if it's STEEL, if it's SCRAP . . . . . put it back to work NOW!

Exploring

The Textile Community

SHOW BUSINESS
Is Good Business In Community Relations

► An amateur show can be fun for your workers—and a source of community good will. These mills have found that entertainment helps a lot to improve community relations.

By MILDRED BARNWELL ANDREWS

MILDRED ANDREWS

"Hurry, Mom! Hurry, Pop! Let's go to the show!"

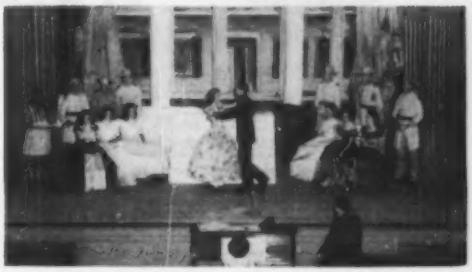
How many times have you heard that plea to put aside your newspaper, urge Mom to stack the supper dishes, and go along to the show with the family and neighbors? Show business, whether it be movies, legitimate theater, or homemade entertainment, is one especially important element of welding community spirit into a more wholehearted feeling of good will. And we put a heavy accent on the homemades.

The variety of talent and the ingenuity with which it is used in the many types of shows put on by people of textile-mill communities is nothing short of amazing. And show talent is drawn from wherever it is found, from the boss's office to the picker room.

One of the more spectacular entertainments and one of the most enjoyable is the Bates Minstrel Show, an annual event in which some 60 members of the Bates Mfg. Co. force at Lewiston, Me., put on the traditional variety show, complete with black-faced end men and the musical flourish and time-honored command: "Gentlemen, be seated!" The preparation of the show, the fun and hard work of rehearsing, and the good fellowship engendered by the entire project are enjoyed by all who participate. And the size of the audience always justifies the cast's ambition for next year's show to be bigger and better.

Callaway Mills sponsors dramatics and dancing as regular recreation features for the school-age youngsters of employees. The recitals and other types of performances put on by the youthful talent are greatly enjoyed by the entire city of La Grange. In that community the local-talent shows are supplemented by the regular Lyceum circuit with its nationally known performers. The latter no doubt stimulates greater interest in community dramatic and entertainment activities.

Avondale Mills was one of the first textile companies to set up a real dramatic project among its mills' employees. Their first big public appearance came in 1936 when the entire cast was loaded into buses and taken to Washington to put on a really spectacular show before the annual meeting of the American Cotton Manufacturers Assn.



MEMORIES OF THE "OLD SOUTH" are evoked in this scene from "This Is It," annual musical comedy staged by employees of the West Point Mfg. Co., West Point, Ga. Principals in the scene are Mrs. Kathleen Barrow and Fred Royal.

and distinguished guests from the White House and environs. The good will created by the excellent and attractive cast, the interesting and colorful costumes, and the superior performance of every act was proudly recognized by the folks back home when the buses unloaded again at Sylacauga, and the weary but happy crew told of their fun putting on a show in the nation's capital.

Russell Mfg. Co. of Alexander City, Ala., sponsors the "Choral Teens" of some 30 students ranging from the 8th to the 12th grades, who are trained by a professional chorister. They travel occasionally, carrying their show from town to town at the invitation of civic and social groups.

Rated as one of the most unusual of the textile-community shows, the Stonewall Trio, consisting of three teen-agers from Erwin Mills families at Stonewall, Miss., won national acclaim last year. With a fiddle, a mandolin, and a guitar, the youths gained top rating three weeks in a row on the Old Gold radio show, Ted Mack's Amateur Hour. They made appearances in Atlanta, New Orleans, New York. Their popularity on radio won them coveted appearances on television. And when they returned home they found right there, at their own front doorstep, the enthusiastic homefolks who felt a stronger bond of friendship because of the community spirit engendered by pride in their boys.

Show business is fun; but more than that it brings the pleasure of hard work and community achievement, fellowship and the ability to laugh at and laugh with the neighbors, and it puts everyone in the project on the same level of production. If you haven't a home-talent show in the making, why not try one? The pageantry of a Christmas play brings new meaning to the holiday season. And if you try a springtime show you'll be surprised to find that you can can-can as well as the next fellow.

Pointers FOR SUPERVISORS

How the Management Team Can Build Better Human Relations

Turn the SPOTLIGHT OF FACTS On Your Labor-Relations Problems

▶ It's easy to overlook the obvious in dealing with your workers. Here's a reminder that you have to dig out the facts to make sound decisions and to convince your employees and the arbitrators that you're right.

By FRANK T. DE VYVER
Vice President and Director of Personnel Relations, Erwin Mills, Inc.

To say that facts are important seems to be stating the obvious; yet those who deal with labor relations must constantly remind themselves and the supervisors with whom they work that many problems in labor relations disappear when the spotlight of facts is turned on them. I work for a company whose plants are organized. In our firm we have an elaborate grievance procedure with arbitration as the final step. Eventually we may have to present facts to an impartial third party. It would be a serious error, however, for any supervisor or labor relations man in an unorganized mill to think he can make decisions on workers' complaints without first getting the facts. From decisions made without careful examination of facts may arise union organization or at least dissatisfied employees. All of us, therefore, who deal with human relations do well to examine our own thinking and actions on this important subject.

Facts discovered before the foreman makes his decision will often make the decision more acceptable to the worker. This statement raises the interesting point of the wisdom of uniformity in carrying out company policies or rules. The easiest thing to do, of course, is to apply a rule with absolute uniformity to avoid charges of partiality or discrimination. Yet from such consistency can come real injustice.

Consider, for example, a rule about fighting in the mill. Such actions are so dangerous that for years we discharged both parties in the scrap without trying to determine fault. Then one time during the war one of our older employees was discharged for fighting with another man who had been with us for a short time. The older man claimed he was hit without provocation, but that didn't sound right to us. Furthermore, our foreman had been drilled on the subject of discrimination (our plant had recently been organized) and our rules were clear—both participants were to be discharged. The union arbitrated the case, and we found at the time of the arbitration that the younger man was in jail for unprovoked assault upon someone else. With that fact before him, along with the older man's statement that he hadn't even said a word to the other fellow, the arbitrator ordered the innocent worker restored to his job with back pay.

We learned our lesson. Since then, taking the risk that we will be charged with discrimination, we have discharged the person we feel is guilty after we have examined the facts. It's more work that way for the supervisor, for no automatic decision is made. He has to interview both parties and witnesses and has to make up his mind. This procedure of finding facts, however, has certainly saved many grievances as well as bad feeling on the part of innocent workers. During the seven or eight years since fact-finding has been substituted for automatic penalty, we have had fights, of course. We have discharged a union president, and the union did not press the case. We have had one arbitration involving a fight, and even in that one (which we won) discrimination was not claimed. In other words, everyone has found that decisions based on facts are fairer than those based on an automatic system of commission, then penalty.

Every supervisor will recognize examples from his own experience. Perhaps he has been tempted to fire a weaver for poor production when the facts show that the regular fixer has been out and the loom rather than the weaver has gone downhill. An automatic rule providing a penalty when production is below a certain percentage would have resulted in an injustice. Or perhaps you have an automatic rule about absenteeism. Do you investigate when a worker with long years of steady attendance fails to report, or do you say, "He didn't report; therefore, he is disciplined"? Finding the facts will be hard and making a decision based upon those facts will be even harder. Decisions made after careful investigation, however, will usually stand and will be accepted as fair by all concerned.

Second only in importance to finding facts is the proper recording of them. Only the memory expert seems never to forget, and he is so rare that we pay admission fees to see him perform. The supervisor's records will not only help him with future decisions but will also aid those who must re-examine complaint cases upon appeal.

The first problem of recording is what to put down. Only judgment based on experience can answer this problem. Even complete records often seem to omit just that one bit of information that would make the picture clear. Recently I had a case where an important date was the one on which a particular experimental machine had last operated. No one knew. Furthermore, no one knew whether the month was February or March. We were distressed that this fact was not known; yet there had been

(*Continued on page 284*)

Westvaco®
CHEMICALS

Delivered as promised—
"packaged" to meet your needs

CAUSTIC SODA

Liquid 50%, Standard and Rayon Grades
Liquid 70-73%, Standard Grade, Flake and Solid

CAUSTIC POTASH

Liquid 45%, Flake and Solid*

NATURAL SODA ASH

Light and Dense

We are proud of the all-time alkali production records made by Westvaco plants in this year of unprecedented difficulties. We believe they will continue to make delivery as promised — both as to quality and quantity.

A continuing program of additions and improvements will provide additional Westvaco alkali tonnage into 1952. We seek new customers whom we can serve efficiently and economically by virtue of our barge, rail and tank-truck service from various Westvaco plants.

We will welcome the opportunity to discuss your alkali needs and our ability to serve them.

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FOOD MACHINERY AND CHEMICAL CORPORATION
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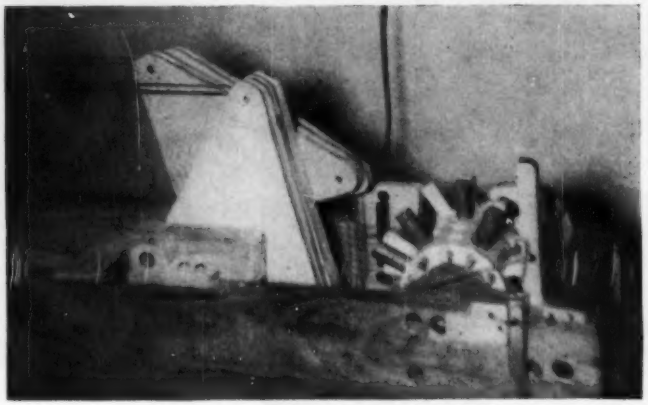
fmc

Kinks AND SHORT-CUTS

For Experimental Patterns Try a Homemade Handloom



THE DRUM on this handloom dobby feeds clockwise and counterclockwise from any position. There is no limit to pattern size or number of picks in any pattern. The harnesses are raised with pins, and the drum has twelve rows of pins for each of the four harnesses.

I have made an experimental handloom with a rocking dobby. The photograph shows the dobby head of this loom. When I built the loom, I supposed that the dobby drum moving in one direction would be enough; but when I learned how expert handweavers are in pattern work, I had to add the counter motion.

The dobby drum raises the harnesses with pins, and the drum feeds clockwise and counterclockwise from any position. Therefore, we think that there is no limit to pattern size or number of picks in any pattern.

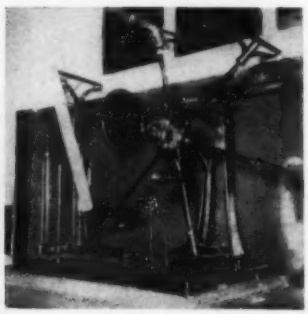
Our drum has 12 rows of pins for each of the four harnesses; and when pattern picks are repeated, we usually set the pins for the two tabby (binder) picks between the pattern picks and rock the dobby to get the tabby pick after each pattern pick. To get plain cloth, we rock the tabby pins only.

A recent layout was pattern pins or picks 1-2, 2-3, 3-4, 1-4; and the tabby pins were 1-3 and 2-4, in that order after each pattern row of pins.

The loom works easily, and it is so satisfactory that I plan to rebuild it in maple or birch. *Walter A. Simond, Essex Junction, Vt.*

Bad Roving and Yarn Shown Up by Blackboards

BAD YARN OR ROVING shows up well when reeled over blackboards on a standard reel. The boards can't be seen in this photograph, but there are six of them—one between each pair of reel arms—forming a background to show up .50-hk. roving.



TO USE A REEL for "boarding" yarn or roving, you must (1) disconnect the standard traverse arm, (2) devise a special guide-and-traverse arm, and (3) use blackboards cut for this use. The text gives a step-by-step account of how Mr. Gibson did the job.

I find it useful to show bad piece-ups, slubs, etc. in yarn to the spinner who made them. And the most impressive way I've found to show up the bad yarn is on blackboards somewhat similar to the boards used by the laboratory in yarn-appearance tests.

It would be a chore for the laboratory to board the yarn for us, and we would have to fit our schedule to that of the laboratory personnel. To avoid that unsatisfactory arrangement, we rigged up a fast, easy way to do our own boarding right in the spinning-room office.

To do the job, we made a few modifications on our standard yarn reel used in sizing yarn. What the changes amount to is that we can now use six blackboards for a background and lay

New and Better

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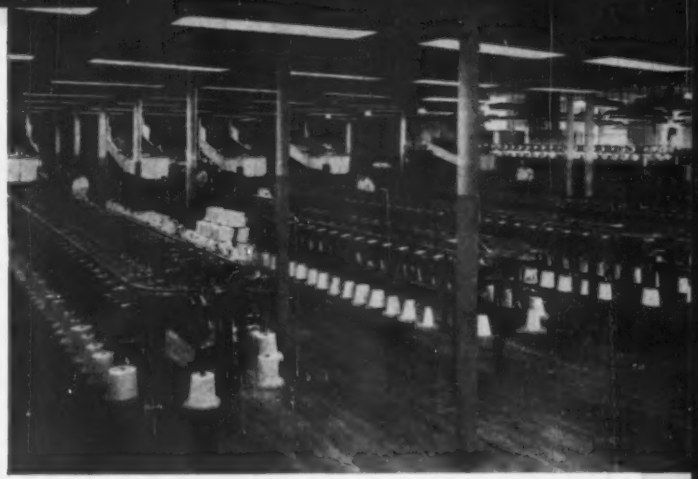
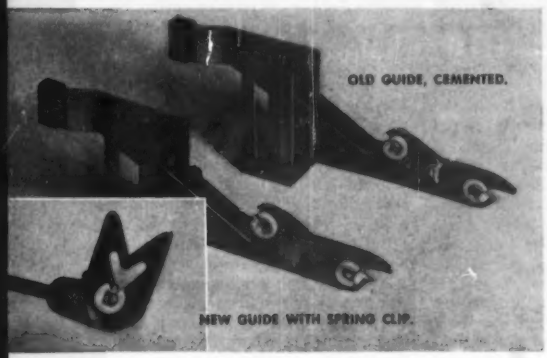
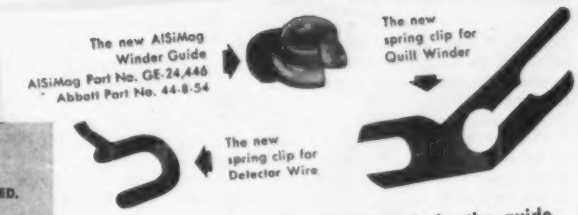
THREAD GUIDE FOR

ABBOTT

QUILL WINDERS and DETECTOR WIRES



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Abbott Part No. 44-8-54
The new spring clip for Quill Winder
The new spring clip for Detector Wire

NEW SPRING CLIP CONSTRUCTION locks the guide firmly in place • NO CEMENTING • NEW GUIDE CONSTRUCTION permits spring clip to hold firmly. Flat and parallel notches on each side under shoulder of guide prevent the guide from rotating • GUIDES CANNOT BE THROWN OUT • NO GUIDE BREAKAGE FROM IMPACT OF THROW OUTS • GUIDES CANNOT ROTATE OUT OF POSITION • LONG CONTINUOUS RUNS ASSURED

Many textile men have asked for a better means of holding guides on quillers and detector wires. The speed and nature of this work makes it difficult to firmly secure these guides and prevent "throw outs" with the customary cementing methods.

In collaboration with Abbott Machine Company, American Lava Corporation has developed a greatly improved AlSiMag 192 eyelet construction used on quill winders and detector wires. Eyelet is held in place firmly by a new type spring clip.

These new AlSiMag eyelets and the spring clips fit your present Abbott Winders. Nothing to buy except the new AlSiMag Guides and the spring clips.

Installation is far quicker, easier than old type. No cement. Simply insert these eyelets and snap the spring clip into position. Easily removed but cannot be accidentally displaced.

The spring clips may be ordered from Abbott Machine Co., Inc., Wilton, N. H. The guides are stocked by Abbott for immediate shipment or may be ordered from American Lava Corporation, Chattanooga 5, Tenn., for shipment after normal production interval.

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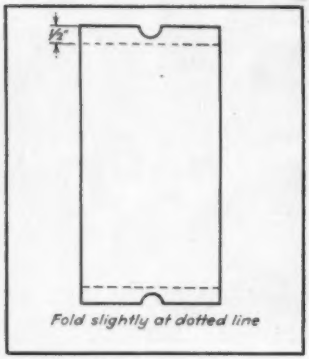


THE BLACKBOARDS are cut, bent over at the ends, and notched as shown here so that they fit snugly between the arms of the reel.

yarn from one bobbin all the way across all six boards—which amounts to several hundred yards of yarn from the same bobbin.

Two basic changes were required.

First, we had to cut six blackboards to fit on the reel so that they filled in the space from one arm of the reel to the next arm.

Second, we had to devise a means for guiding the yarn to the reel and traversing this guide slowly across the reel arms so that one wrap of yarn lay flat on the boards beside the previous wrap.

The boards were cut as shown in the accompanying sketch.

Each board is about 1 in. longer than the space between two arms of the yarn reel. Each end of the board is folded over ½ in., and a notch is cut to fit the round collar used to attach the reel arm to the spoke of the reel. When the board is placed on the reel, with the bent-over ends toward the hub of the reel and the notches fitting against the spoke collars, the upper surface of the board is in position for the yarn to lie against it from one reel arm to the other.

Six of these boards are needed for the six spaces between the reel arms.

The yarn-laying device was arranged as follows:

First, the standard yarn guide of the reel is disconnected.

On the standard reel, four pigtail guides attached to a supporting arm are traversed back and forth in a short stroke to lay the skein of yarn flat and prevent piling up on the arms of the reel. This traversing is done by a cam on a horizontal shaft, the shaft and cam being driven by a gear on the other end of the shaft meshing with a worm on the reel mainshaft.

The standard short-stroke traversing is stopped by removing the screw that connects the traverse arm to the cam.

When the screw is removed, the upright arm supporting the four pigtail guides is loose and out of control. We just wedge it with a pencil so that it stays upright.

Second, a new yarn guide must be provided. The one we use can be seen in the photograph. It is made of smooth flat stock, with an open thread guide pressed in the upper end. A collar that slips around the upright support for the standard pigtail guides holds the flat stock in place. The lower end of the new thread-guide arm is fastened to this collar by a stud that permits the arm to traverse on the stud as a pivot.

A weak coiled spring fastened to this stud and hooked over the inner side of the arm keeps the arm pressed outward so that positive force is necessary to make it traverse.

Third, the traversing force is supplied by a pully fastened on the standard traverse shaft at the back of the reel. The force is transferred from the pulley to the new guide arm by a pull cord. This cord is tied to the upper part of the arm in a small drilled hole, and it's fastened to the pulley by a small wooden peg inserted in a hole drilled on the rim of the pulley.

Here's how the device works.

As the reel is turned and the standard traversing shaft turns, the pulley we added to the shaft turns. This action pulls the cord tied to the new guide arm, and the arm is pulled toward the pulley. The thread guide in the top of the arm moves enough to lay a wrap of yarn on the reel (and blackboards) besides the previous wrap.

We made four pulleys of different sizes to lay yarn and roving of different sizes. The larger the pulley, the faster the guide arm is pulled and the more open the lay of the yarn or roving on the boards.

The bobbin of yarn or roving being reeled is placed on one of the four standard reel spindles.

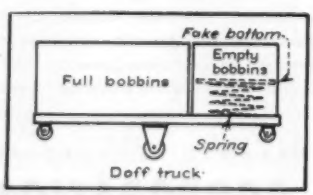
The disadvantage of this method is that the yarn is not wrapped around the blackboards but is just laid over them. Therefore, the "boarded" yarn can't be kept.

To reconvert the "seriplane" to a standard reel, the pull cord between the pulley and the new guide arm is removed and a retainer wire is fastened to the arm and to the standard upright arm that supports the pigtail guides. This position of the new guide arm is shown in the photograph.

The only other step necessary is to reconnect the standard traverse arm to the cam by reinserting the screw.

The reel can be changed from one use to the other in less than a minute. *W. C. Gibson, Jr., Atlanta, Ga.*

False Spring Bottoms In Spinning-Doffer Boxes



WITH SPRINGS in the bottoms of our doff boxes, we use fewer bobbins. Bobbins don't just lie in the bottom of the box all the time; all bobbins in the box are used.

When we made a methods study of our doffing operation, we found that the doffers refilled their doff boxes with empty bobbins when the boxes got about half empty. To try to cut down on the number of trips the doffer had to make to the bobbin bin, we put false bottoms in the doff boxes. These false bottoms are supported by springs, which keep the empty bobbins pushed up toward the top.

We used old roving-can springs and cut them off to fit the doff boxes. We had to do considerable experimenting with the springs to get them to withstand the normal pressure of the bobbins.

Spring Keeps Gainer Belt Tight

We had some tubes come back to the winder room because of bad winding, and I found this trouble was caused by the gainer belts not staying tight. The winders are Foster Model 77s.

To correct the trouble, I put a spring on the gear-case cover bolt and fastened it to the stationary base. The spring keeps the gainer belt tight. With the spring, I have taken out the belt locknut.

We have had no more trouble. *W. H. Edwards, Rocky Mount, N. C.*

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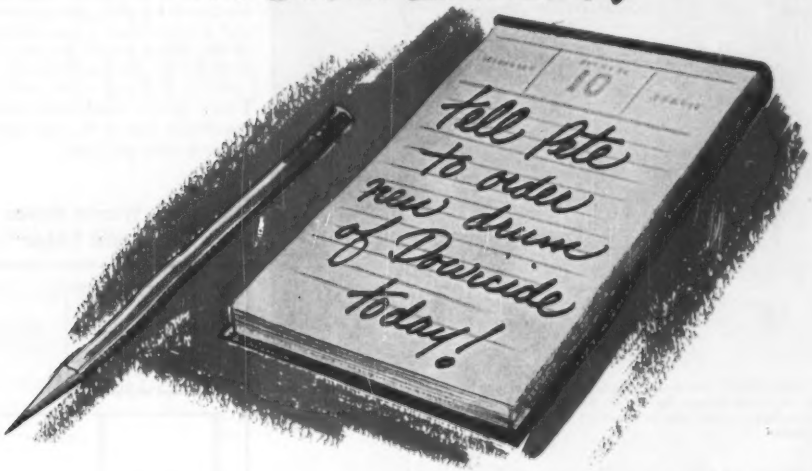

For years textile manufacturers have depended on Dowicide industrial germicides and fungicides because they give protection from microorganisms both in processing and in finished products. Check this list of benefits *you* can derive from the use of Dowicide products.

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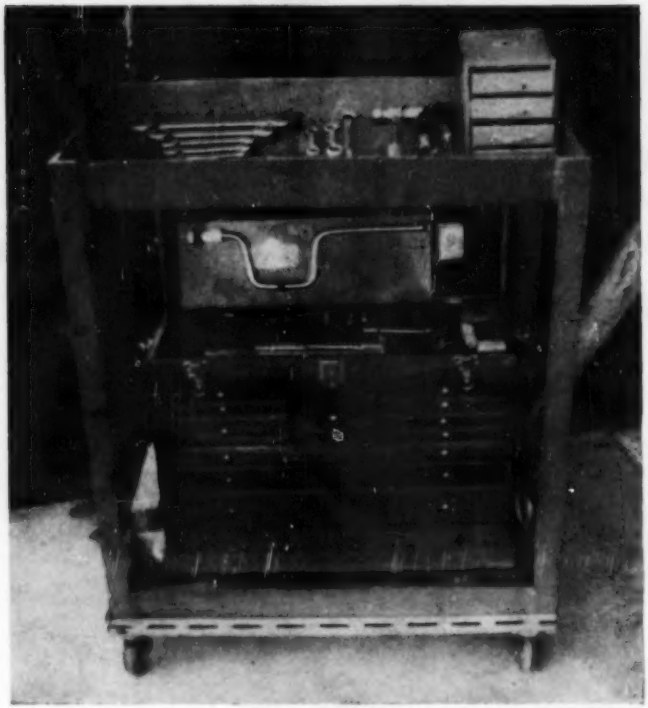
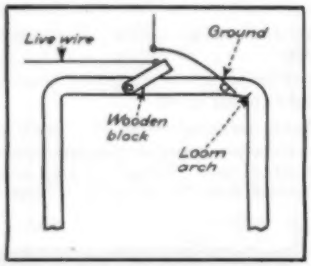
DOW CHEMICALS

Each of Our Loomfixers Has His Own "Tooltoter"



WE HAD A "TOOLTOTER" like this one made for each of our loomfixers. The unit saves him time and labor on a job because he has all his tools with him, and he doesn't need to run back to the workshop. A vise can be mounted on the top of the table. *A Keith Fawcett, Huntington, Quebec.*

Here's a Stop Motion for Jacquard Looms



IF THE SCALE SHAFT should miss from the front or rear, it will cause contact to be made, and the loom will be stopped on that pick. The ground is a ¾-in. metal strip, and the live wire is a piece of loom-heddle band.

In our jacquard weave room, weavers run 8 to 10 looms; and it was very hard for them to watch for imperfections caused by broken pattern lacings, loose cylinder pegs, or bad cylinder alignment. We made a stop motion that will stop the loom on the pick when one of these troubles occur. Now our weavers need to watch for only needle marks.

Here's how the stop motion works:

On the block that holds the separating pins for scale shafts, we grounded a ¾-in. metal strip. Above this strip, about ¼ in., we stretched a piece of loom-heddle band and fastened both ends of it with a piece of rawhide. Our live wire is fastened to this band.

The rawhide will hold the band tight and still permit it to make contact under the slightest pressure. If for any reason the scale shaft should miss front or rear, it will cause the opposite end to dip and make contact. The loom will be stopped on that pick. Anything that causes the needle to miss and not lift the grounded lever will cause contact to be made. *Benjamin L. Embar, Denver, Pa.*

How To Prevent Line Effects in Satin

Diagonal and horizontal effects in satins are defects that may downgrade the quality of such weaves. These defects are found quite often, and at times it is not easy to overcome them.

When I start getting these effects in satins, I follow a definite procedure to correct them. Here's how I do it.

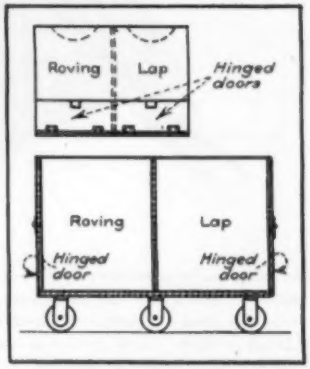
1. Check the weight and tension of the warp to be sure that both are correct.

2. Be sure that the shafts are not too high and are not lifting unevenly.

3. Try a slight change in the construction of the fabric. Sometimes an increase in the picks per inch will help, and at other times a lower denier size of the filling will do the job. Often both changes need to be made.

4. Try a change of the reed count. I have gotten satisfactory results by re-entering four or five ends per dent at seven ends per dent.

Doors On Waste Boxes Save Time and Labor



THE WASTE BOXES on the end of our spinning frames have hinged doors at the bottom of the outsides. These doors can be dropped and the waste can be scraped directly into waste trucks. Our waste trucks have a partition in the center for two kinds of waste. A hinged door is at each end of the truck to facilitate easy removal of the waste.

A few simple changes on our waste boxes and trucks has saved our waste man a lot of time and labor in picking up the spinning-room roving and lap waste.

Our waste boxes are mounted on the ends of spinning frames and are divided by a partition down the middle so that spinners can put lap waste

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Pontamine* Fast Blue CPL is a direct-dyeing, greenish-blue recommended for its good light and washing fastness on viscose-process rayon when after-treated with resin finishes. It is of particular interest for dyeing rayon dress goods, sportswear, suitings, drapery and upholstery materials.

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BETTER THINGS FOR BETTER LIVING...*THROUGH CHEMISTRY*

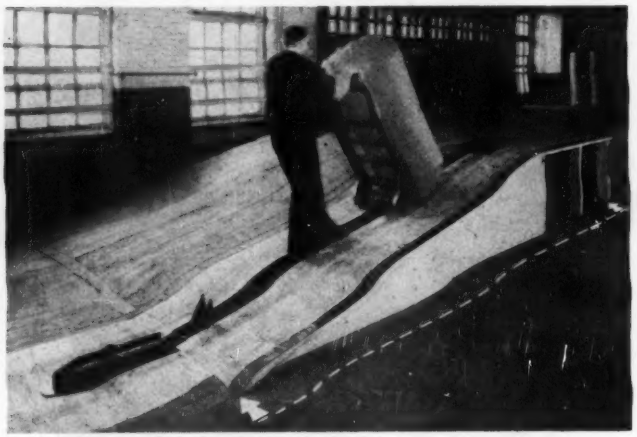
in one side and roving waste in the other. When our waste man had to pick this waste out of the boxes by the handful, it wasted his time.

We put a small hinged door on each half of the divided box, with a holding catch on the upper edge. This door can be dropped and the waste scraped directly into the waste truck that is positioned below for each kind of waste.

Instead of having two separate trucks for the different wastes, we put a partition down the center of a larger truck. The waste man can pick up two kinds of waste with this one truck.

We also put a hinged door on each section of the truck to make it easy to remove the waste. When the lap waste is sent to the waste house for baling, the hose from the vacuum system can be placed in the door opening and the waste removed without further handling.

Hand-Truck Conveyor Used for Two Floor Levels



THIS HAND-TRUCK CONVEYOR runs on powered sprockets and has special heavy dogs spaced at considerable distances apart so that they will engage the axle of a loaded truck as shown in this picture.

Mills that must transport material from one level to a slightly higher or lower level have a handling problem. In some cases, small elevators have been installed to give ready access from level to level. In other cases, a portable ramp similar to the one shown in the accompanying picture is used. A portable ramp may be located to give easy access from level to level when desired, and it may be removed when it is not used.

When hand trucks are used over ramps, truckers going from the lower level to the upper level may require help to get their loads up the ramp. The special hand-truck conveyor shown in the photograph was designed for that purpose. The basis of this conveyor is a heavy chain that runs on powered sprockets located so that the top strand of the chain is approximately flush with the inclined surface of the ramp.

This powered chain is fitted with

$200 for Best Kink in 1951
$25 for Best Kink Each Month

In Addition to Space Payment on Acceptance

You undoubtedly know of many kinks and short-cuts that are helpful to mill operators. Write them down and send them in. We pay promptly on acceptance—before publication. In addition, your kink may win the $200 check for the best kink of the year or the $25 check for the best kink of the month; maybe both!

Send in your kink now. There is always a contest going on. The more good kinks you send in, the better your chances of winning a prize in addition to earning some easy money for every kink accepted.

We will polish up your writing and will have an artist make finished drawings. But send in plenty of details so that your kink can be clearly explained. Be sure your sketch is clear and well labeled, but it need not be a polished job. Best of all, send us a good glossy photograph of it—we will pay you extra if you do and we can use it.

Look over the kinks in this and other issues. You will get ideas you can use as well as inspiration for kinks you can send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments or methods of merit—anything that will cut costs, improve quality, or help production.

Your published kink will be judged impartially by other mill men. In case of ties, duplicate prizes will be awarded.

RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $200 prize contest for the year. Monthly contest confined to kinks published that month, yearly to those published in calendar year 1951.
3. All kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 200 will be asked to select preferred kinks in each issue. Their votes will select the best kink, and their decision will be final.

Send kinks to whichever adress you prefer:

TECHNICAL EDITOR, TEXTILE WORLD
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Sweater . . . skirt . . . stockings . . . by "courtesy" of B & C spun nylon yarn! Available in 20 wonderful fast colors. Color fastness equal to or better than Synthetic Fiber Test #1 and #2 AATCC.

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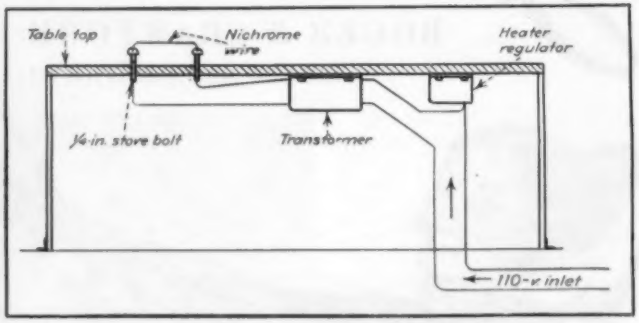
special heavy dogs spaced at considerable distances apart. They engage the axle of a loaded truck. The particular hand-truck conveyor shown in the photograph is used in a textile mill where the shipping platform is on a level well above the floor of the mill proper. The trucker can also ride the conveyor. *John E. Hyler, Peoria, Ill.*

Knit a Longer Tip for Loopless-Toe Seaming



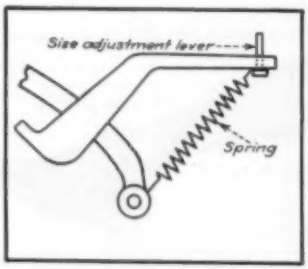
WE BURN OFF the loopless-toe tip of our full-fashioned hosiery to leave an even tip for the seamer to start in her uncurler and to stop any raveling of the fabric tip. One girl can burn about 400 doz. per 8-hr. day.

Starting loopless-toe stockings in the uncurler is a bit different and probably a little harder for the operator than starting looped stockings. Most mills have trouble in keeping the toe tip from raveling. Some of them have the knitter trim the end of the toe tip, but sometimes a long end is left and causes trouble in the seaming operation.

We have eliminated the problem of long ends and raveling in this way: We knit an extra 8 or 10 courses in the toe tip before pressing off. Then we burn the toe tips off to leave an even tip for the seamer to start in her uncurler. This burning stops any raveling of the fabric tip.

One girl can burn about 400 doz. per 8-hr. day. The only parts necessary to set up the burning operation are: a flat table; a 6, 8, or 10-v. transformer; and a small piece of microme heater wire about 6 in. long attached to two ¼x2-in.-long stove bolts.

The burner is operated from a 110-v. line. We adjust the heat regulator so that we get the microme wire just red. Too much heat will burn the wire in two. *H. B. LeFeaux, Dallas, Texas.*



Spring Helps Give Uniform Winder Package

ON OUR UNIVERSAL Model-102 winders, we had some trouble with the size-adjustment lever knocking off the spindles before the package was full. We put a spring on each head, as shown in the diagram, to correct this trouble. The spring is fastened to the size-adjustment lever and holds it in place. *W. H. Edwards, Rocky Mount, N. C.*

Our Warp Trucks Are Homemade

THIS WARP TRUCK can be maneuvered easily by one man. The pipe supports are welded to the 3-in. angle-iron base, and the unit is mounted on four swivel rubber-tired wheels. The drop wires rest on the top of the supports. The warp may be set directly into a loom by sliding it along the edge of the truck. No lifting is required. *A. Keith Fawcett, Huntingdon, Quebec*

Best-Kink Award for October

Each month TEXTILE WORLD awards $25 to the submitter of the kink judged by a panel of over 200 practical mill men as the best for that particular month. A new batch of kinks appears each month, and a new group of readers acts as judges each month.

If you are asked to judge one of these days, be sure to help select the best kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the kink appears.

The best kink for October, according to TEXTILE WORLD reader-judges, was:

"How I Sell Jobs With Photographs"

Ralph P. Kreuter
Sheboygan, Wis.

Mr. Kreuter is being sent a check for $25 with the compliments of TEXTILE WORLD.

"light soaping is enough!"

—TO RINSE PRINTING THICKENER OUT COMPLETELY

AMBERFLO, a highly soluble printing thickener, deposits a soft print. Light washing rinses it out quickly. Easily. Completely. Using tap water. Result? Happier production men. And fabrics that warm a fashion designer's heart with their softness . . . sparkling color . . . finer hand and body.

AMBERFLO eliminates cooking, cooling and expensive mixing equipment. Simply blend it with chemicals and water. In a few minutes, the "color" is ready. Splitting is minimized on "Sheers" and other fragile fabrics, because it deposits a smooth, pliable film. Color yield is higher. Penetration and detail are excellent.

AMBERFLO is recommended for vat, rapidogen, direct, acid and acetate colors. Also white discharge.
National Starch Products,
270 Madison Avenue, New York 16, N. Y.

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STARCH PRODUCTS

We want to know more!

We're interested in AMBERFLO—*National's easy-rinsing, ready-for-use printing thickener.*

☐ *We want more technical data.*
☐ *We'd like a plant demonstration.*

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Free Technical Information

Reader Service

MILL EXECUTIVES may obtain free for the asking . . .

. . . OUTSTANDING TRADE LITERATURE reviewed on the next and following pages

. . . FURTHER INFORMATION on
New Textile Equipment
New Dyes & Chemicals
New Useful Accessories
Editorial Articles
and the Advertisements

WRITE ON THIS CARD

. . . to get more information on anything published in this issue

. . . to send a Kink, a letter for Round Table, or a news note

. . . to comment on anything appearing in this issue

. . . to query the editors about any manuscripts you might wish to submit to them

. . . to send an inquiry to the Questions & Answers department

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Cards require no postage . . . but be sure to give your name, title, mill connection, and address

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CIRCLE NUMBERS ON THIS CARD

. . . to request copies of trade literature described on the next and following pages or to get more information on New Useful Accessories described in this issue

Dear Editor: DECEMBER, 1951

Please send me additional information on the following:

PAGE	SUBJECT	PAGE	SUBJECT
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TRADE LITERATURE Numbers F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F35 F36 F37 F38 F39 F40 F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57

NEW USEFUL ACCESSORIES Numbers U1 U2 U3 U4 U5 U6 U7 U8 U9 U10 U11 U12 U13 U14 U15 U16 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32

NEW EQUIPMENT on page (give page number and identifying letter which can be obtained from the table of contents on page 3) .....

.....

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This Card Expires March 31, 1952

Outstanding TRADE LITERATURE
Free for the Asking

NO REPEATS . . . Listed here for December are current bulletins reviewed by the editors of TEXTILE WORLD. To get the ones you need, circle the number on the Reader-Service card, as described on the preceding page.

TEXTILE MACHINERY

Dyeing and finishing machinery—padders, steamers, washers, dry cans, and agers—is featured in a booklet made available by Tower Iron Works. Custom engineering to fit your special requirements is also discussed. **(F-1)**

An automatic blending system said to pay for itself in 6 to 24 months is described in a folder prepared by Textile Equipment Corp. Blend variation as little as 1% is also said to be possible. **(F-2)**

Three sizers have been made available by Birch Brothers, Inc. The products described are their two-burner singeing machine, a two-roll padder, and an individual vacuum extractor. **(F-3)**

A fully automatic bobbin winder is described in a booklet issued by Scharer Textile Machine Works. The machine stacks full bobbins in a box and avoids further handling or sorting before bringing bobbins to the loom. **(F-4)**

A homogenization study has been abstracted for publication by Manton-Gaulin Mfg. Co. The booklet includes photomicrographs of yarn treated with boiled size, homogenized size, and unsized yarn for comparison. **(F-5)**

A preetting box for nylon hosiery is the subject of a bulletin from Lydon Bros., Inc. Completely automatic, the device is available for operation on low-pressure steam, electricity, or a combination of the two. **(F-6)**

Slashing at Waverly Mills, Laurinburg, N. C., is shown in a folder published by Charles B. Johnson. The text is illustrated with three views of the slasher in operation. **(F-7)**

Cloth-finishing equipment in a wide range is described in a folder issued by J. E. Carroll & Co. One of the interesting pieces shown is an all-welded cylinder 10 ft. in diameter. **(F-8)**

Machinery for cloth rooms, print works, bleacheries, dyeing and finishing plants, and coating plants is described in a catalog prepared by Curtis & Marble Machine Co. The line is for use with cottons, spun rayons, rayons, silks, and mixed goods. **(F-9)**

The random-web process—from start to finish, including machinery and settings—is the feature of a bulletin issued by Curlator Corp. Production data is also given. **(F-10)**

Finishers take note! Cook-F & N Machine Co. has made up a new catalog that includes diagrams of steam-pad dye ranges, cloth-opening ranges, and bleaching ranges. The catalog has full-page technical descriptions and photos of all component machinery. **(F-11)**

AUXILIARY EQUIPMENT

A digest of motor controls has been prepared by the Clark Controller Co. The booklet gives information on a. c. and d. c. motor starters, motor-control centers, contactors, relays, and other accessories. **(F-13)**

"Automatic" flow-control systems are described in a booklet issued by Fischer & Porter Co. Gases, liquids, and slurries can be handled in one or two lines. Flow can be set anywhere from 15% to 600% of normal. **(F-12)**

Microscopes of new design are shown in a booklet published by Bausch & Lomb Optical Co. The new line, called Dynoptic Labroscopes, features increased use of ball bearings and handier controls. **(F-14)**

Railroad engines have nothing on cloth trucks. A ball-bearing turntable for cloth trucks is described in a booklet made available by Birch Bros., Inc. Cloth in rope form is kept free of twist by use of the turntable. **(F-15)**

"Diagram for Danger" is one of the features of a recent issue of the *Wesco Reporter*, a Westinghouse Electric Supply Co. publication. The feature tells how to arm your plant with daylight at night to ward off marauders. There is another article on lights that go out almost a minute after you flick the switch. **(F-16)**

The automatic Uster yarn-strength tester is shown in a folder made up by Zellweger Ltd. You should read it carefully to realize what this machine does. It registers individual values of strength and elongation, sums each set of values, gives a frequency distribution, and indicates the number of tests. **(F-17)**

A companion booklet to the above describes the Uster Type-C tester for rayon and other synthetic fibers. **(F-18)**

Magnetic separators and lifting magnets are discussed in a bulletin prepared by Dings Magnetic Separator Co. The

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Reader Service (Continued)

publication tells which magnets to use to dry or wet materials in chutes, ducts, and on conveyors. **(F-19)**

Automatic dispatch systems are the subject of a bulletin from The American Monorail Co. Among the textile applications shown are systems that carry warps and warp beams automatically to and from storage to the slasher. **(F-20)**

Viscometers are discussed in a booklet issued by Norcross Corp. Three reasons tell why laboratory tests of viscosity are not usually adequate. **(F-21)**

A time clock for machinery that shows downtime at a glance is described in a bulletin issued by Service Recorder Co. Either 12- or 24-hr. charts can be prepared. Practically any kind of motion can activate the mechanism, which is entirely self-contained. **(F-22)**

A lightweight-model conveyor that carrys up to 30 lb. per hook is described in a catalog published by Chain-O-Flex Corp. The system appears suitable for several textile applications. Can you think of any place you could use it? **(F-23)**

Do not lubricate the new life-line type SK d.c. motors and generators, says a bulletin from Westinghouse Electric Corp. The bulletin described types, enclosures, and mountings for many different applications. **(F-24)**

SUPPLIES AND CHEMICALS

"What's new in Spectrophotometry" is the title of a technical bulletin prepared by American Cyanamid Co. Lots of conversion formulas and tables are included. **(F-25)**

If you're interested in physical properties of synthetic organic chemicals, you ought to use the Reader Service postcard to get a bulletin issued by Carbide and Carbon Chemical Co. Data on more than 300 products, including 38 new ones, is given. **(F-26)**

A new roll covering for take-up rolls is described in a folder prepared by The Carborundum Co. Texalox, as it is called, is not a sandpaper. Metal coating of granular particles on a cloth backing does the job. **(F-27)**

Wool bleaching with the hydrogen peroxide dry-in process is described in a bulletin published by Buffalo Electro-Chemical Co. Facts and figures on the continuous process gives the bulletin added value. **(F-28)**

ENGINEERING AND MAINTENANCE

Lighting for color matching, grading, and inspection. Prepared by Macbeth Corp. Cotton classing and color matching are two of the main uses for the equipment described. **(F-29)**

Induction frequency converters are featured in a bulletin from General Electric Co. Three-phase equipment in ratings from ¾ to 100 kw. is shown. High-frequency power-supply equipment is described from the ground up. **(F-30)**

Incinerators for several kinds of refuse are covered in a catalog published by Plibrico Jointless Firebrick Co. From 135 to 3,500 lb. per hr. can be handled in the units. Other special sizes are for garbage, cafeteria refuse, wood refuse, and other applications. **(F-31)**

Basic facts about materials handling are given in a booklet issued by Clark Equipment Co. Did you know that a towing tractor or trailer-train is better than a lift truck for long hauls—under a 400-ft. round trip? **(F-32)**

Outdoor industrial lighting plans are provided in a booklet published by Westinghouse Electric Corp. Among the special topics treated are fence boundaries, water-front boundaries, and industrial thoroughfares. **(F-33)**

Corrosion data for several analyses of stainless-steel tubing and pipe are given on a letter-sized card available from the Carpenter Steel Co. Agents of many types are described, and an alloy is recommended for each application. Standard sizes are given on the back of the card. **(F-34)**

LYNCH CORPORATION of Toledo, Ohio,
—a leading manufacturer of packaging machinery

says

"This Lubricant Reduces Service Calls!"

MORPAC Model "I" and "K" combined print forming, wrapping and cartoning machine

The following quotation is taken from a letter we received from their Director of Sales:

"The majority of our machines are used in places where it is necessary to wash them with steam and hot water after each day's use. This naturally would remove any ordinary lubricant and trouble would develop if the machines were not immediately relubricated. With LUBRIPLATE it is different. There is always a film of LUBRIPLATE left on the machine after washing. This gives protection not only to moving parts, but also prevents general corrosion. The presence of salt and lactic acid in packing plants makes oxidation a hazard. LUBRIPLATE prevents this too.

"LUBRIPLATE greatly reduces unnecessary wear and prolongs the life of machines. It has reduced customer calls for service to a minimum. Our Service Engineers can readily spot machines that have had other than LUBRIPLATE Lubrication, as these machines do not give the service they should.

"After using LUBRIPLATE for over ten years, we are very well pleased with it and enthusiastically recommend it."

A LUBRICANT must be more than good to warrant such a recommendation. The Lynch Corporation, as well as hundreds of others who build machines to sell, not only use LUBRIPLATE Lubricants in their own shops, but also advise the buyers of the machines to always use LUBRIPLATE for re-lubrication.

LUBRIPLATE Lubricants are different from all other lubricants. They have properties all their own . . . they reduce friction and wear, prevent rust and corrosion and save power. They stay put under most adverse conditions and do not run out or wash away.

There is a LUBRIPLATE Lubricant that is just the right density for your requirements. Let us tell you about it. *Write today.*

LUBRIPLATE DIVISION
Fiske Brothers Refining Company
Newark 5, N. J. Toledo 5, Ohio

DEALERS EVERYWHERE—CONSULT YOUR CLASSIFIED TELEPHONE BOOK

LUBRIPLATE ***THE MODERN LUBRICANT***

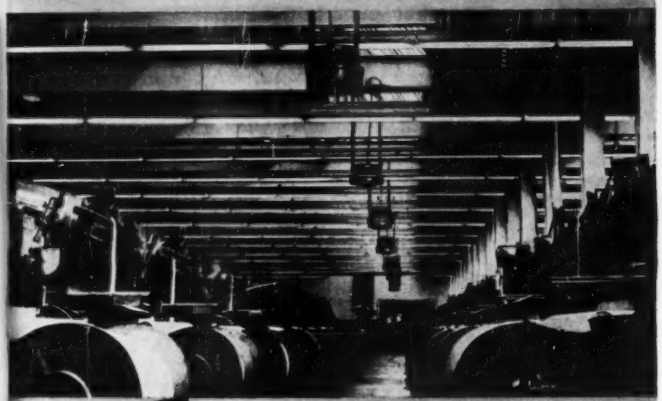
Depend on-

MODERN HUMIDIFICATION

by Walton —for every need!

SIMPLIFIED TROUBLE-FREE SYSTEMS FOR spot, booster or complete humidification

The modern Walton System provides dependable and accurate controlled humidity conditions which can be installed at minimum cost. Expensive duct work, air lines and compressors are eliminated as the Walton System needs only simple water and electrical connections. Uniform controlled distribution can be maintained in rooms with high or low ceilings. Filter protected models externally remove lint and dust, assuring efficient operation under normally adverse conditions. Check on the Walton System, now. Full engineering data is available without obligation.



Just Off the Press—New Textile Catalog!

WALTON LABORATORIES, INC. 14
Irvington 11, New Jersey

Please send copies of the following:

☐ "HUMIDIFICATION FOR TEXTILES"
☐ "HUMIDIFICATION FOR KNITTING"

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

Reader Service (Continued)

Power-plant equipment. Photographs, flow diagrams, dimensional drawings, performance charts, and specification tables illustrate this bulletin put out by The Swartwout Co. Among the equipment they make are control valves, desuperheaters, feedwater heaters, separators, and other assessories. **(F-35)**

"Tantalizing textiles"—that's a term used to describe America in a catalog issued by Buffalo Forge Co. The catalog graphically describes how the company's equipment is used in several industries. In textiles, you'll find their air-conditioning systems, fans, and pumps. **(F-36)**

Industrial trucks of many types are shown in a catalog prepared by the Elwell-Parker Electric Co. High-lift and low-lift platform trucks share the space with fork trucks and mobile cranes. **(F-37)**

Storage heaters for water are the subject of a couple of bulletins from the Whitlock Mfg. Co. You can find out if either vertical or horizontal tanks would best suit your requirements. **(F-38)**

Single-phase inductrols (low-voltage, dry-type induction voltage regulators) are described in a new bulletin made available by General Electric Co. The new line, rated 0.3 to 24 kva., is for use in circuits rated 3 kva to 240 kva. **(F-39)**

"Keep floors safe." That's the admonition carried in a folder issued by A. C. Horn Co., Inc. Their antiskid product can be used on floors, treads, or ramps made of wood, concrete, or steel. **(F-40)**

Lifting and dumping of any free-flowing material is discussed in a bulletin published by Jacob House & Sons. Their equipment handles material in bags, barrels, bulk, or special containers. **(F-41)**

Steam generators are the subject of a booklet prepared by Orr & Sembower, Inc. High- or low-pressure units from 15 to 500 hp. are described. Units can be quickly changed from oil to gas firing. **(F-42)**

The Industrial Lowerator, a device that utomatically raises and lowers materials to a convenient working level, is described in a booklet issued by American Machine & Foundry Co. You might use this device for cloth rolls, roving, in your machine shop, or elsewhere. **(F-43)**

Got a light load to convey? Teleflex, nc., has prepared a folder that illustrates their lightweight conveyor. Because the screw-type system is one-way, only 100 ft. of conveyor is needed for a 100-ft. haul. **(F-44)**

You can tension, cut, and seal steel strapping in three easy motions with a tool described in a folder from the Brainard Steel Co. Strat-O-Matic holds up to 100 seals and weighs about 12 lb. **(F-45)**

Hand spraying of soft metals such as aluminum and zinc is described in a bulletin issued by Metallizing Engineering Co., Inc. The unit uses 3/16-in. wire and gas to coat metals for corrosion protection. **(F-46)**

GENERAL

Interested in industrial feeding? You can expedite your service seven ways, according to a folder issued by Vacuum Can Co. They make insulated hot-food, soup, and liquid carriers. **(F-47)**

Follow-up folders that don't let you forget to remember are shown in a booklet from Remington Rand Inc. Scheduling, orders, service, collection, etc., can all be handled. **(F-48)**

Special Textile Finishes, 5th Ed., has been made available by U. S. Testing Co., Inc. The list gives trade name, manufacturer, fiber applied to, and properties of the finish. **(F-49)**

Specifications for the yarns and superfine fiber glass to be manufactured by the new Fiber Glass Div. of Libbey-Owens-Ford Glass Co. are fully outlined in a pamphlet now available. **(F-50)**

BETTER TEXTILES AT LOWER COST
have been made possible in this country
by the great progress the chemical
textile fiber industry has made in recent years.

Viscose rayon and acetate yarns and staple fiber
of greater strength, uniformity,
and with "tailor made" properties,
have been developed. These fibers
have been made available in large quantities,
and at reasonable prices,
for conversion to a great variety
of superior new fabrics.

Rayonier has made an important contribution
to the remarkable development
of this industry by producing
the chemical raw material—
highly purified wood cellulose—
from which these chemical fibers are made.

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Producers of highly purified wood cellulose for textiles, tire cord, cellophane, plastics

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It's as easy as this to

ISOLATE VIBRATION

and

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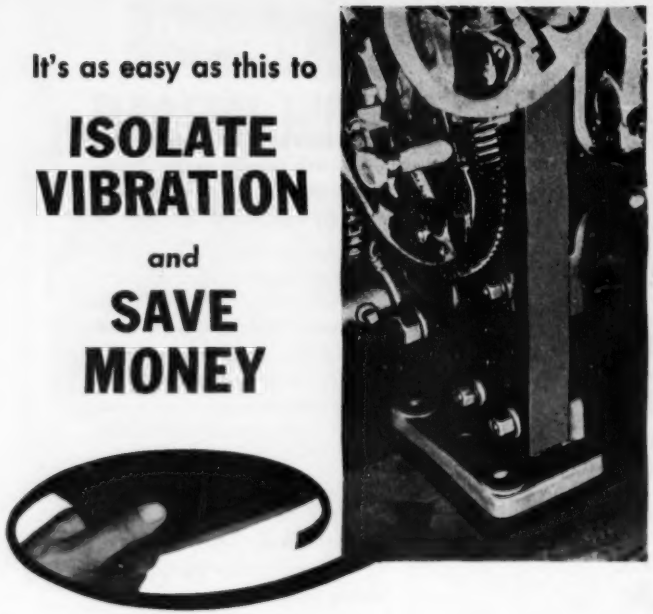

...with ISOMODE* TEXTILE PADS

Here's the durable mounting to absorb vibration . . . reduce noise . . . cut your operating costs. By test and in actual mill installations, the Isomode Textile Pad has proved to be not only one of the most economical mounts, but also one which does a superior job of isolating vibration.

This 3/16" ribbed, resilient pad works wonders under support feet of looms. By absorbing the motions of the looms, and the forces normally transmitted to floors, Isomode Textile Pads reduce straining and undue deterioration of machinery. With no anchoring bolts needed, it costs you less to install looms — to relocate them — to maintain them. And you get a quieter mill besides.

Made of long-lasting DuPont Neoprene that resists oil, water, aging. Write for details — discover their surprisingly low cost.

*Trade Mark Reg. U.S. Pat. Off.

THE MB MANUFACTURING COMPANY, INC.
1084 State Street, New Haven 11, Conn.

Please send data sheet containing more information on Isomode Pads and how to install them easily and quickly.

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Distributed by: MATTHEWS EQUIPMENT COMPANY, Providence, R. I. STANDARD MILL SUPPLY CO., New York, N. Y. • THE SATTERLEE COMPANY, Minneapolis, Minn. • R. B. DORMAN, Atlanta, Ga. O. D. LANDIS, Charlotte, N. C. • UPTON BRADEEN & JAMES, LTD., Toronto, Ontario and Montreal, Quebec.

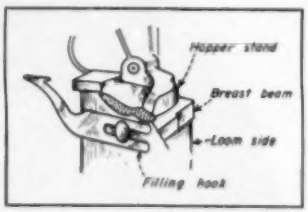
Questions AND Answers

Remedy For Jerked-In Filling

Technical Editor:

Can you give me more information about the third-end catcher mentioned in one of your issues as a remedy for jerked-in filling on Draper looms? (9465)

The third-end catcher is a filling hook similar to the one sketched below.



This is a flat hook bolted to the loom side under the battery. The hook extends just inside and above the lay (when the lay is at the extreme front position), and is parallel to the shuttle feeler.

When the filling is changed, the strand of filling from the expelled bobbin is brought forward by the horn of the front box and deposited on the hook, which retains it until the end is cut by the temple thread cutter.

Fabrics With Loops On Both Sides

Technical Editor:

What types of looms or knitting machines can make fabrics with loops on both sides? (9466)

Terry looms are made by both Crompton & Knowles Loom Works and Draper Corp. A knitting machine that produces a looped fabric is made by Textile Machine Works of Reading, Pa.

Fabric requirements govern the choice of loom vs. knitting machine for fabrics with loops on both sides. Towels, beach robes, filter cloths, and washcloths in all white, colors, stripes, or fancy floral designs are woven on automatic terry looms. Some ladies' sweaters and linings for industrial gloves are knitted. There is usually a big dimensional change when a

Rayon Reports

Section Beams Wound Experimentally in 4½ hours

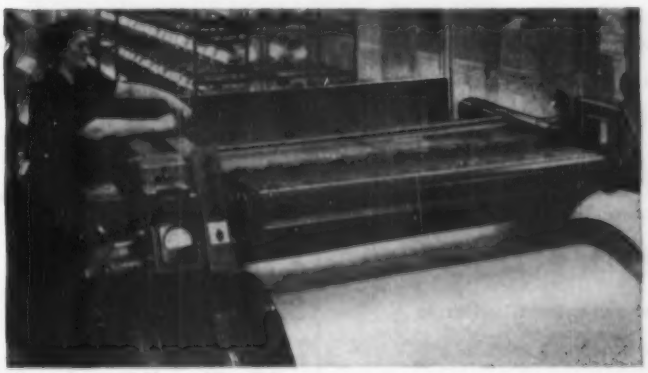
New Facilities of Avisco Textile Research Department producing interesting results

Avisco's Textile Research Department is now turning out section beams from cakes in as short a time as four and a half hours in experimental work with a new type beamer. Each beam carries 766 ends of 100 denier rayon 53,000 yards long, and beams have been wound with as low as six breaks each.

In these Avisco experiments, as a result of improvements in the formation of the cakes, coning is bypassed, the beamer being fed directly from the cakes. Time and motion studies have also enabled Avisco to reduce to thirty-five minutes the time required for three experienced girls to tie the 766 knots necessary each time a new beam is started.

Electronic control keeps the yarns moving at a constant speed and provides for an automatic stop, without skidding, whenever a break occurs. As a result of these and other refinements the speed at which it is being run by Avisco is approaching 450 yards per minute. Among these other refinements are a traverse, quick-doffing arrangement, pre-setting counter, and an instant speed change.

This machine is one of a number of new textile machines installed recently by Avisco's Textile Research Department. The department has long engaged in a continuing study of fibers, yarns, fabrics, finishes, and equipment, for the service of the textile industry.



RAYON 20 YEARS AGO

New York, December, 1931—An improved earning outlook for the rayon industry is predicted in 1932.

Paris, December, 1931—Cocktail pajamas of rayon are being emphasized by designers, here.

Berlin, December, 1931—A process has been proposed for manufacturing rayon by using static electricity in the viscose solution.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

World's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

Yes, the Heim Unibal Sweepstick is not only saving time and money, but has improved pick action on every loom on which the change-over has been made.

Instead of an elongated stud hole, this Heim Unibal Spherical Bearing delivers long-wearing, smooth operation, and corrects any misalignment at the stud.

The sweepstick body is made of resilient, shock absorbing, rubber bonded fabric. The spherical bearing is assembled as an integral part of the body.

When you replace worn-out sweepsticks, switch to Heim Unibal Sweepsticks for economy's sake.

Please *Write* for prices and descriptive circular on various sizes . . . . .

THE HEIM COMPANY

FAIRFIELD, CONNECTICUT

Questions and Answers

(Continued)

knitted-terry article is laundered, but in some cases this instability is not important.

Fabrics woven with "Zip-Knit" yarns can also have loops on both sides. These yarns are made on a tricot-knitting machine under a process developed at Textile Research Dept. American Viscose Corp., Marcus Hook, Pa.

How To Remove Stains on Nylon Shirting

Technical Editor:

How can we remove stains caused in the weaving of nylon shirtings? (9469)

To remove stains caused in the weaving of nylon shirtings, try a highly volatile hydrocarbon solvent such as trichlor-ethylene (Triclene).

It is necessary to use a highly volatile solvent in order to prevent ringing of the spot. A pad of some absorbent material should always be placed beneath the nylon fabric in order to absorb the excess solvent during application.

When working with solvents of the type mentioned, adequate ventilation is always necessary. Solvents of this type are usually toxic to an individual when inhaled.

Homogenizing Synthetics

Technical Editor:

Is the homogenizer being used in the slashing of synthetic yarns? (9471)

Homogenized pearl cornstarch is replacing gums for sizing spun rayons in several installations. Weaving, shedding, and size removal are said to be quite satisfactory.

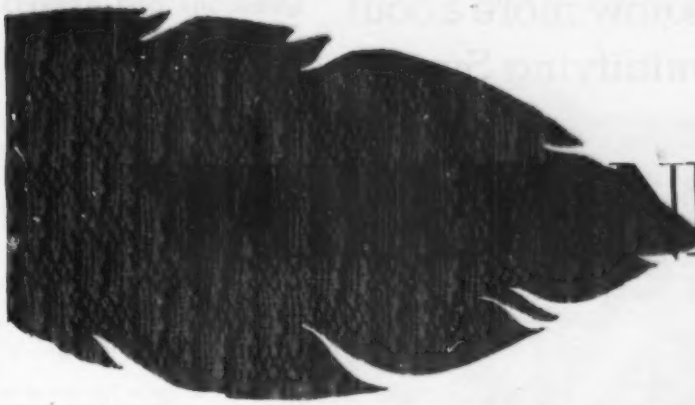
Construction Facts About Nylon Shirtings

Technical Editor:

What sizes of yarn are used in poplin-type nylon shirtings? Are the yarns bright or dull? We would like to know the construction, width, and finishing shrinkage. (9470)

In poplin-type nylon shirtings the usual yarn size is 50 den., semi-dull. Bright yarns are practically never used since they would give the shirtings too high a luster and present a shiny appearance.

As to constructions, width, and finishing shrinkage, this depends entirely on the individual mill. The manner in which the material is woven and also the various methods of handling and finishing differ from plant to



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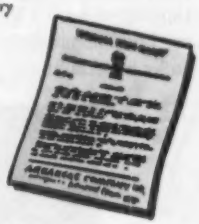
for durable softness and added sales appeal...

***PARAMINE T A® produces a so... ...rn** in addition to a pleasing surface finish. An efficient cationic product, it imparts a durable, long-lasting, full hand to cotton and rayon fabrics, woolen cloth and hosiery. It is highly effective on all styles of woven and knitted goods, including tricot and glove fabrics.*

***PARAMINE T A** is excellent for finishing cotton goods, plain dyed and printed in combination with gums, starches and similar products. On prints of very open design and blotch work, it gives a more even hand from selvedge to selvedge, and a smooth feel unobtainable with ordinary softeners. Write for details.*



Arkansas Co., Inc.
P. O. Box 210
Newark, N. J.

Gentlemen:

Please send me, without obligation:

- ☐ Full details on PARAMINE T A
- ☐ Sample and application procedure
- ☐ Details of mill demonstration

NAME _____ TITLE _____

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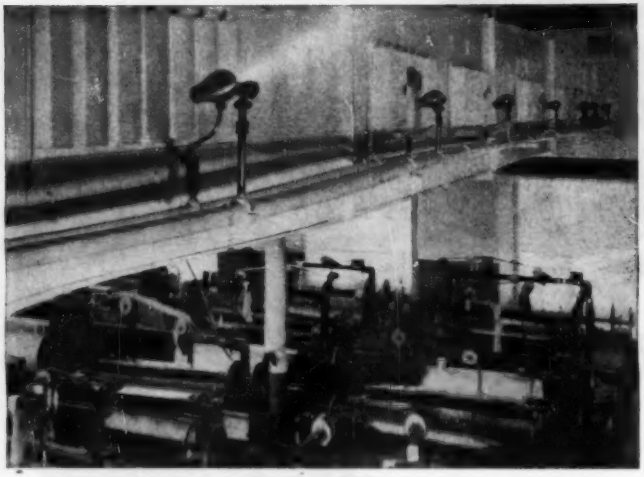
Arkansas Co. INC.

MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS

NEWARK, NEW JERSEY

You ought to know more about this Humidifying System



The GRADUMATIC humidifying system, shown to the trade for the first time at the American Textile Machinery Exhibition last year and tested and tried for five years prior to that, has fully demonstrated its value both alone and in combination with Certified Climate Airchangers or as boosters for Central Station equipment.

Unlike all previous fixed capacity "on and off" systems, the Gradumatic system delivers fog-like moisture continuously in balance with room demands. Each atomizer has a variable capacity of from 2 to 16 pounds per hour, eliminating over- and under-humidifying.

The AIRCHANGER provides adequate ventilation and circulation, maintaining uniform temperature and humidity conditions, and insuring maximum evaporative cooling.

The new gradual-acting Certified Climate Psychrostat makes all this possible. Sensitive, rugged, reliable.

More accurately controlled atmospheric conditions could help in your mill by making yarn stronger and more pliable, by increasing production and improving quality in all departments, by making the atmosphere more comfortable and healthful.

Parks-Cramer Company

Fitchburg, Mass. Charlotte, N. C.

PARKS Certified Climate

Questions and Answers

(Continued)

plant and thus determine width and working loss.

We do not believe there is any standard construction for this type of fabric since each manufacturer weaves and designs according to his individual ideas. There are probably rather wide variations in shrinkage and width from one fabric construction to another and from one method of processing to another.

Contraction Formula Not Used For Twisting

Technical Editor:

Your July issue on p. 228 referred to two constants used to calculate twist contraction on ring-spinning frames. Can you tell us how these constants were derived? Is the formula good for twisting too? (9472)

We don't know where the formula originated, but Prof. Bogdan of the School of Textiles North Carolina State College of Textiles stands behind it.

The formula cannot be used for twisting because of the vastly more complex mathematics involved in the helical arrangement of plied yarns with varying directions and amounts of twist.

"Pilling" Defined

Technical Editor:

What is a good definition of "pilling?" We've heard the term used a lot lately but can't find it listed in any of the textile dictionaries or reference works. (9473)

A "pill" is a tangle of fibers, and "pilling" is the process of forming such tangles. It is a term used by woolen, worsted, and synthetic producers and is usually applied to fabrics, but it is also used in connection with wool in earlier stages of manufacture, even raw wool. Cotton men would call a "pill" of fiber a nep.

Pilling is most prevalent, of course, in woolen and woolen-type fabrics where fuzzy yarns are common. When the fabric surface rubs against something (either itself or a foreign surface), short fibers pull out of the fabric yarns and entangle themselves with the ends of one or more fibers still held in the yarn. In this way the pill is held on the cloth surface and can be removed only by breaking the fibers still held in the yarn. Considerable trouble with pilling has also been encountered in some of the newer fibers.

In the first Dacron men's suits, for example, these little balls, some not as

Greetings
FOR
A
PROSPEROUS
NEW YEAR
INDIGOSOLS
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Color & Chemical Company, Inc.
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Topping them all!

52% OF ALL GAS-POWERED FORK TRUCKS

40% OF ALL ELECTRIC-POWERED FORK TRUCKS

ordered in the first 6 months of 1951 were CLARKS! In 1950 Clark sold—50% of all gas-powered fork trucks...26% of all electric-powered fork trucks...

This steadily-rising sales curve (or trend) closely reflects consistently-lowered materials-handling costs effected by Clark machines. The fact that more and more Clark machines go into the hands of more and more satisfied customers every day is your positive assurance of Clark's superiority.

Find out how you, too, can save money and time by the use of Clark equipment. Fill out the coupon—mail it today!

CLARK ELECTRIC AND GAS POWERED FORK TRUCKS

AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 27, MICHIGAN

Please send the following: ☐ SAFETY SAVES ☐ BASIC FACTS ☐ CONDENSED CATALOG ☐ MOVIE DIGEST

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AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

Questions and Answers

(Continued)

big as the head of a pin, formed on the fabric surface at self-wearing points in the suit: at the back of knees and inner side of elbows, at the collar and shirt contact point, at the bottom of trouser cuffs, and at leg areas rubbed together during ordinary walking.

Pilling is being eliminated in Dacron suits by the use of longer-staple fibers and by the insertion of more twist in the yarns. Cloth construction has also been modified.

How To Figure The Bobbin-Spindle Ratio

Technical Editor:

What should be the ratio of bobbins to spindles in a cotton mill that averages 18s yarn and has 18,000 warp spindles and 14,000 filling spindles? Our spinning and winding works three shifts, and weaving runs two shifts. (9476)

Most engineers allow eight bobbins per spindle for warp and twelve bobbins per spindle for filling.

The filling figure would allow for conditioning of all filling yarn. Some extra allowance may be necessary on filling bobbins for the shift stoppage on weaving. The winding or spooling running three shifts should keep pace with the spinning and return empty bobbins for refilling. The filling figure, of course, assumes that the looms are equipped with magazines.

A more general calculation for the ratio of bobbins to spindles is as follows:

1. Determine how long the bobbin is on the spinning frame, warper, winder or loom.
2. Multiply the figure obtained above by the number of spindles.
3. Add 10%, and you have the approximate number of bobbins needed.

We must emphasize, however, that the number of bobbins needed depends entirely on local mill conditions and can best be determined by a test in your mill of just how long the bobbin stays at each operation.

Remedy for Seeds And Leaves In Card Sliver

Technical Editor:

How can we eliminate small seeds and leaves in card sliver? We use Strict Middling, 1¼-in. Central Belt cotton. Our card cylinder has 110s wire, and the doffer has 120 wire. Our grinding cycle is every 200 hrs. (9477)

Your wire, with 120s wire on flats, appears right for your class of work. The grinding cycle of 200 hr. should

Always Uniform

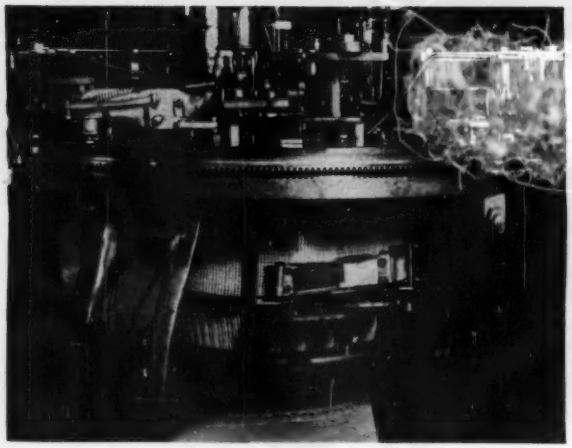
There is often no open-and-shut answer to slashing problems. But one thing is basic . . . only unvarying quality such as you get in Victor Mill Starch can insure smooth performance day after day.

That's why Victor is known as "The Weaver's Friend" throughout the industry.

For better penetration, stronger warps, less shedding . . . rely on Victor Mill and the conscientious help of the Keever man who serves you.

TEXTILE SALES DIVISION
1200 WOODSIDE BUILDING
GREENVILLE, SOUTH CAROLINA
Charles C. Switzer, Manager

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO
Corn, wheat and other grain products for industry since 1898



THE SWEATERS
WITH THE "BRUSHED-IN" SALES APPEAL
KEEP YOUR EYE ON
COST AND QUALITY

CLEAN GOODS:

In using this Circular Brusher the brushed fabric is produced as clean as the yarn on the bobbin or cone — no hours spent in cleaning brushes for light colored work.

NAP QUALITY:

The quantity of nap is produced by pressure or tension of brushes against the fabric. The lightest of fabrics can be safely and evenly brushed without any danger to stitches. This type of brushing eliminates side imperfections, giving an even, soft, buoyant feeling surface.

OPERATION:

The finest and lightest of single stitch fabrics can be brushed without injury, or molesting the inside appearance of the stitch in any way. The fabric is in no way weakened as it is not under special strain between metal bristles and cylinder as some flat type machines are constructed.

Write for Information

Built Right Brushes Right

LEIGHTON MACHINE COMPANY LEIGHTON MANCHESTER NEW HAMPSHIRE INCORPORATED

Questions and Answers

(Continued)

prevent dull wire if done properly. Check your opening and picker settings to make sure the larger leaf is not being broken up into smaller particles. Correct adjustment of air currents will also help in removing small seed and leaf. A Kirschner beater on the finisher-picker section gives a better-opened lap for action of the lickerin.

Closer card settings of 0.007 in. for lickerin to cylinder, 0.012 in. for top and bottom mote knives, and 0.008 in. for flats to cylinder have been found effective in the removal of pepper trash. Avoid excessive card production. Eight to 10 lb. per hr. with sliver weight of 50 to 55 gr. is recommended.

Maximum Traveler Speed

Technical Editor:

What is the maximum traveler speed for cotton ring frames? (9475)

A mile a minute is generally recognized as the practicable maximum traveler speed on cotton ring frames. Speeds beyond this usually result in shortened traveler life. Lubricated spinning rings are said to permit higher traveler speeds.

Spindle speeds between 9,000 and 10,000 rpm. are common in mills on medium and fine counts. With a 24-in. ring and a spindle speed of 9,000 rpm., the speed of the traveler would be about 5,300 ft. per min. A 3-in. ring with a spindle speed of 6,800 rpm. would give a traveler speed of about 5,340 ft. per min. on a coarse yarn number.

This method of calculating thus shows roughly the relation of spindle speed and ring diameter to traveler speed in ft. per min.

Sizing Wool-Acetate Blends

Technical Editor:

We're having trouble weaving a blend of 20% acetate and 80% wool (58s Quality). Our warp yarn is single, and it roughens and untwists behind the loom.

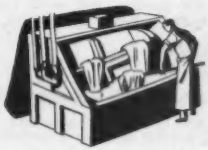
We think the trouble is in our slashing. These two formulas have not worked so far:

Parts by weight—	
(1) Potato starch	5
Water	125
(2) Potato starch	6
Carpenter's glue	1¼
Water	125

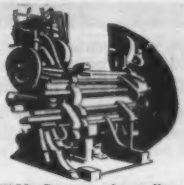
Can you suggest a better size formula? (9474)

Your first formula doesn't contain anything with an affinity for acetate

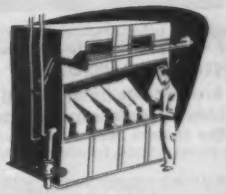
If you need OXALIC ACID



LEATHER & FURS—Vegetable tanning of sole and upper leathers; also bleaching of furs



TEXTILES—For removing soil or smears after black aniline printing; in development of color when printing; for removing rust stains



DYES—In manufacture of dyes

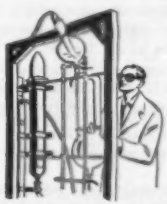
for these or other uses...

CLEANERS—For cleaning rust from railroad cars and buses; also as an auto radiator cleaner

PENTAERYTHRITOL — In manufacture of pentaerythritol, used in making surface coating resins and explosives

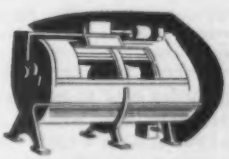
CHEMICALS—For manufacturing oxalates and other chemicals

Call on GENERAL CHEMICAL



DRUGS—For manufacturing pharmaceuticals, antibiotics

PLASTICS—As a polymerization catalyst or decoloring agent



LAUNDRIES — For laundry sours and rust removers

Wherever it is used, General Chemical Oxalic Acid is known for its purity and for the uniformity of its crystal size. It is readily available from the Company's coast-to-coast chain of distributing stations.

So, remember—wherever you need Oxalic Acid . . . for whatever purposes . . . call on General Chemical!

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Fielden INSTRUMENTS AND CONTROLS

Accurate instruments that measure, indicate, and control moisture content in fabrics, surface level of liquids, and other conditions of textile processing are increasingly used by efficient mills. Such instruments go far to overcome troubles that occur when rule of thumb methods are used. Fielden Drimeters and Controllers are in constant use by leading mills on the tenters, sizers, dyeing machines, and in other places to maintain the proper moisture content.

DRIMETER on drying machine.

$23,000 SAVED BY FIVE FIELDEN DRIMETERS ON TENTER FRAMES

Fielden Drimeters, applying a unique electronic principle, were installed on five tenter frames by a leading dyer to control moisture content of goods.

Moisture content was controlled to within ± 1%. Variations in texture and color of the cloth no longer occurred. The finish was bettered. Goods had fuller hand and more lustrous texture. They were never over or under dried. Production was so increased that one entire shift was eliminated and put on other work in the plant. Savings were at the rate of $500 a week—$23,000 on the basis of total production. *(Ask for 4-page report of how this dyer saved $23,000 a year.)*

Your moisture control problem may be different, but there are few processes that involve moisture that cannot benefit by the use of Drimeter controls.

This increases production because the tendency of operators is to overdry, which reduces the drying rate.

FOR SURFACE LEVEL CONTROL OF SIZE IN SLASHING

Fielden TEKTOR Level Switch assures a constant supply of size in the size box. It is compact, has no floats or moving mechanical parts. By means of an electrode set in the size box, any falling of the size below the proper level is immediately shown by a pilot light and when desired operates a valve or pump to admit more size to the box. A differential as close as 1/32" can be set up and maintained.

FOR UP TO 15% GREATER SPEED IN SIZING

Fielden electronic moisture control automatically maintains the exact moisture content of warps during sizing. This prevents over drying that causes excessive end breaks in weaving. It also prevents underdrying.

Users report that they can run warps at up to 15% greater speed. They get accurate and consistent results with acetate and nylon yarns that they could not get with any other controls.

Fielden TEKTOR Level Switch.

Fielden INSTRUMENT CORPORATION
2090 NORTH 4TH STREET
PHILADELPHIA 33, PA.

Canadian Agent: **ELECTRODESIGN**
145 Normand St., Montreal

Questions and Answers

(Continued)

and isn't strong enough to be used on a singles yarn.

The second formula has a better chance for success, but we'd recommend that you heavy it up a bit, say:

Potato starch	8
Gelatin	2
Water	125

We would also recommend that you add a small amount of softener to the mix.

However, another line of reasoning that is receiving a considerable amount of favorable comment these days is the use of a single product that contains all the sizing essentials in dry form. When such a product is used, the mill just adds water and heats to whatever amount of the size has been found to work best. Determination of the type and amount of size product depends on the fibers used, yarn number, fabric construction, loom speed, type of loom, relative humidity, and many other factors.

We suggest that you get in touch with several of the manufacturers of sizing products and let them make some trial runs in your mill.

Tails Or Splits In Linen Roping

Technical Editor:

We are having trouble with tails or splits in linen roping. Can you tell us what causes these splits?

Our card is a 60x60 Davis & Furber with a double rub apron and a wire wipe roll. Nine other cards in the same room seldom give us any trouble. (9478)

Since your other cards are not giving any trouble, there is probably some mechanical adjustment necessary on the offending machine. A thorough overhauling may solve your problem.

Tails or splits can also be caused by static. An investigation of the static on this one card may help you, too.

Answers to Textile Quiz On Page 170.

1. c. [TW, Oct., '51, p. 4]
2. b. [TW, Oct., '51, p. 159]
3. a. [TW, Oct., '51, p. 284]
4. c. [TW, Oct., '51, p. 252]
5. c. [TW, Oct., '51, p. 126]
6. d. [TW, Oct., '51, p. 127]
7. d. [TW, Oct., '51, p. 128]
8. a. [TW, Oct., '51, p. 145]
9. b. [TW, Oct., '51, p. 147]
10. d. [TW, Oct., '51, p. 149]

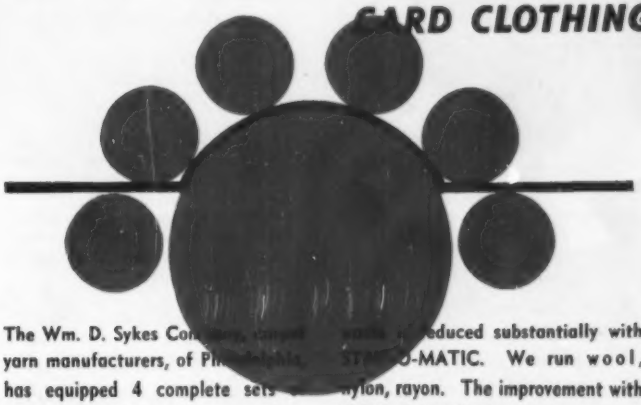
Booth

Originators of STRIP-O-MATIC *

CARD CLOTHING NEWS AND VIEWS

RUNS BETWEEN STRIPPING INCREASED 300%
WASTE CUT 70% with

STRIP-O-MATIC CARD CLOTHING



The Wm. D. Sykes Co[illegible], carpet yarn manufacturers, of Ph[illegible], has equipped 4 complete sets of cards, in addition to numerous partially clothed sets—including cylinders, workers and doffers — with STRIP-O-MATIC Card Clothing. These sets have run beside sets equipped with conventional clothing for nearly a year providing accurate comparison on the same stock.

Mr. Roland Kerr, Chief Carder, reports, "We have to strip on conventional clothing every 30-40 hours; each time we remove approximately 8 lbs. of waste. With STRIP-O-MATIC we make runs of 100 hours without stripping; then remove only about 2 lbs. of waste. Our stripping [illegible] reduced substantially with STRIP-O-MATIC. We run wool, nylon, rayon. The improvement with STRIP-O-MATIC has been uniformly good. Previously we were seldom able to run a complete dye lot. With STRIP-O-MATIC we can."

* *Patented* ®

EXPORT BUYERS

Save time—money—labor with STRIP-O-MATIC card clothing—now available for overseas sales. Your inquiries invited.

Nylon card after nine months operation. Note complete absence of trapped stock.

New Type STRIP-O-MATIC Card Clothing Proved In Mill Operation

STRIP-O-MATIC Card Clothing in the last two years has been put to work in more than 200 textile mills, carding practically all textile fibres. The following reports from pleased users are typical.

Color Lots Are Run Complete without stripping. Many modern carpet plants are able to run up to six weeks without stripping. With the conventional clothing that STRIP-O-MATIC replaced, stripping was necessary every day or two.

Savings Up to $1,000 per Year by eliminating waste stock in stripping from a STRIP-O-MATIC equipped breaker card, are reported by a prominent Canadian Mill.

Performance Record. A finisher card with conventional clothing ran 24 hours—stripped 2 lbs. waste. A finisher with STRIP-O-MATIC ran twelve days (24 hours per day)—stripped 6 oz. Carding was excellent, good web, no fibre damage—saving $170 on one finisher in 12 days.

Typical User Comments: Less Fly, Greater Strength, Greater Production, Less Shrinkage, Better Quality, Stripping is Easier; Working well on 70[s] wool.

A Benjamin Booth representative will be glad to call to help you achieve similar results with STRIP-O-MATIC.

Sincerely yours,

E. Allen Knapp Jr

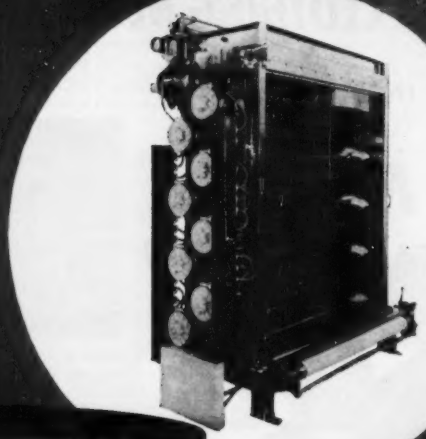
PRESIDENT

Established 1892

Booth

BENJAMIN BOOTH COMPANY, ALLEGHENY & JANNEY STS., PHILA., PA.

METLKOR BRUSHES PREFERRED



NEW HERMAS MOTORIZED BRUSH

"Most of our customers prefer METLKOR BRUSHES," states the Hermas Machine Co., well-known manufacturer of distributor equipment, "because:

"—The cores never warp or get [illegible] of alignment . . .

"—Bristles don't fall out . . .

"—Rolls are balanced to prevent whipping . . .

"—All of which is conducive to long brush life and even brushing."

Hermas uses METLKORS in its new motorized brushing machine, as they have in other Hermas brushes, because of their superior performance.

The metal cores, of chromium, cold drawn steel, stainless steel, copper, or brass, cannot sag, split, or get out of alignment.

Bristle is wound on the cores by our patented refillable process, firmly held with flat metal wire, and sealed with special baked phenolic cement.

* Reg. U. S. Pat. Off.

M. W. JENKINS' SONS, INC.

74 YEARS OF INDUSTRIAL BRUSH KNOW-HOW

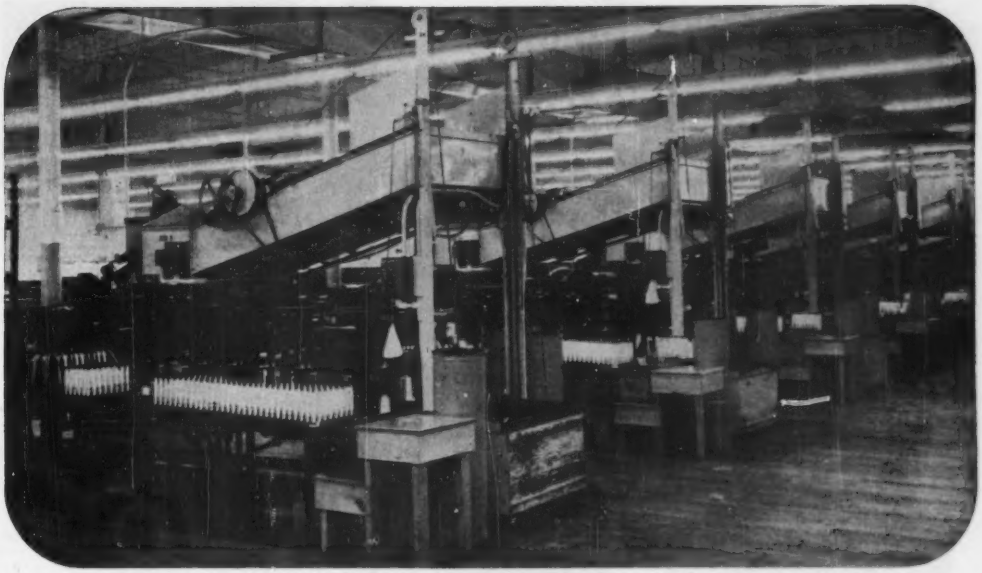
Cedar Grove, Essex County, New Jersey

Mill Maintenance

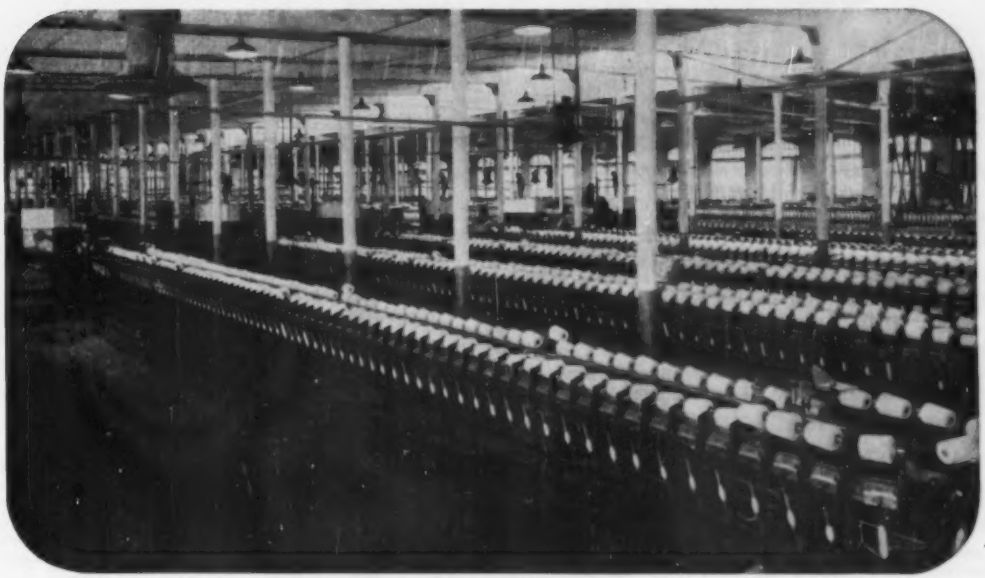
13 Tips On Installing V-Belts

You may know all or only a few of these suggestions on the installation of V-belts. In any event, you should remember all 13 if you have anything to do with them. Here they are—

1. Check often for stretch and sag, especially during the breaking-in period.
2. Allow enough clearance for the belts to sag so that they will not touch guards or steelwork.
3. Original tension of a new set of belts can be generally higher than normal to allow for initial stretch and groove seating.
4. Install guards for protection against oils, greases, and foreign materials such as stones, dirt, etc.
5. Install only matched sets of belts.
6. Do not use idlers to put tension on the belts.
7. Install sufficient take-ups.
8. Never mix new belts with old belts on the same drive. This principle also applies to different makes.
9. Do not operate V-belts too tight. They will wedge down into the sheave grooves, which will cause reduced efficiency and life and cause unnecessary internal heating of the belt.
10. Avoid operating V-belts in temperatures higher than 140° F. Above this temperature, rubber will be overcured and belt life will be reduced.
11. Do not force or pry V-belts with tools. Release the take-up.
12. Clean grease off new sheaves before you install the belt.
13. Install well-ventilated guards to keep heat from building up.



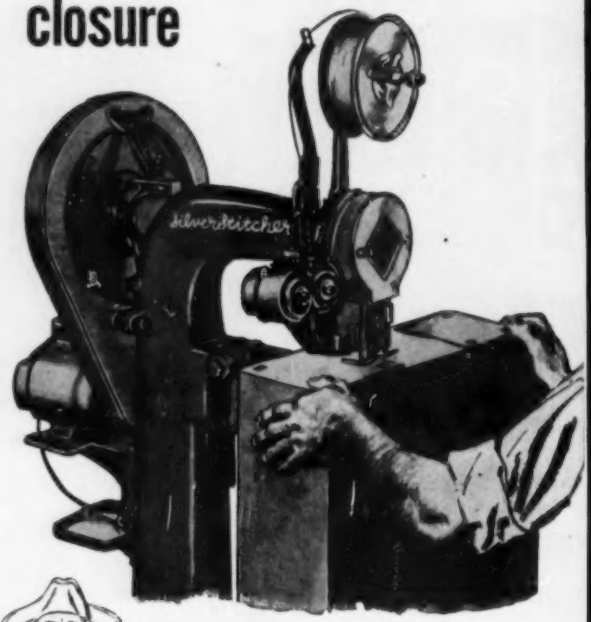
Winding a better weaving loom bobbin that improves fabric quality, Abbott Automatic Quillers offer the lowest winding cost in the automatic winding field. One operator can maintain a steady production load of from 1000 to 2000 wound bobbins per hour.



With the Abbott Automatic Cone or Cheese Winder, one operator, from a seated position, sets full bobbins in a rotating magazine and doffs full packages, maintaining a steady production of from 800 to 1000 bobbins wound onto packages per hour. It's the low-cost installation for efficient twisting, warping, or sale yarn package winding.

ABBOTT MACHINE CO., INC.
WILTON, NEW HAMPSHIRE
SOUTHERN OFFICE, GREENVILLE, S. C.

How to save time, cut costs on carton closure



"TIME IS MONEY" —Ben Franklin, 1748

When your packing department people pack more cartons per hour, your output goes up and your costs go down. That's why so many manufacturers today stitch their cartons with Acme Silverstitchers.

For example, B&T Metals Co., Columbus, Ohio, cut material costs 87% and cut time per carton 30% by installing Acme Silverstitchers to help package pieces of extruded aluminum.

Connors Brothers, Ltd., Black's Harbour, New Brunswick, cut material costs 43% and labor costs 50% by packing canned sardines in fibreboard cartons bottom stitched by an Acme Silverstitcher.

A packer of medical kits cut closure costs 81%. A maker of fluorescent lamp bulbs saved $15,000 in one year. An asphalt producer doubled his output with fewer men.

There's a complete line of Acme Silverstitchers, and there's almost sure to be one to save time and cut costs for you. Ask your Acme Steel representative for details, or write Dept. TEX-121.

ACME STEEL COMPANY
2840 Archer Avenue, Chicago 8, Illinois

ACME STEEL

Steel Strapping — Steel Hoops — Box Straps — Venetian Blind Slat Stock — Corrugated Fasteners — Strip Steel

Useful Accessories For Textile Mills

▶ **To request further information on any item, please use the card in the Reader-Service dept.; refer to the number at the end of the item concerned.**

All-Steel Trailer

A new-style all-steel medium-duty trailer designed to replace old-style wooden trucks has been developed by Market Forge Co., Everett, Mass. The new rubber-wheeled trailer is said to be suitable for handling bagged material or for carrying one or more loaded pallets. Smooth steel construction with rounded corners and edges prevents damage to materials handled. Specifications are: capacity, 3,000 lb.; length, 69 in.; width, 36 in.; height of end racks, 23 in.; height deck from floor, 14 in. (U-1)

Compressor Air-Check Valve

A check-valve for use in the discharge line of an air or gas compressor has been announced by Pennsylvania Pump & Compressor Co., Easton, Pa. The function of the check-valve is to prevent leakage of pressure through the compressor during the off-cycle, to dampen pipe-line pulsations, and to permit repairs to any unit, where more than one compressor is on the line, without causing a shutting down of the system. The aircheck valve is designed for high efficiency, long life, and low-cost maintenance. (U-2)

Electrical Metallic Tubing

A new plastic-armored electrical metallic tubing has been announced by Samuel Moore & Co., Mantua, Ohio. The tubing is designed for use where corrosive atmospheres necessitate frequent replacement of electrical conduit. In the new "Dekoron" conduit, a 0.020-in. coating of tough, corrosion-resistant vinyl or polyethylene plastic is extruded over standard galvanized electrical tubing. The manufacturer states that "Dekoron" conduit is impervious to the corrosive effects of moisture, salt air, acids, alkalis, oils, and grease, and is immune to normal temperature changes. (U-3)

Fluorescent Lamp Lock-Guide

An improved guide and lock for fluorescent lamps has been developed by Edison Electrical Co., 355 Weybosset St., Providence 3, R. I. Known as the Edison "Lok-Gyde," the product is designed to perform two important functions: to channel the terminal pins into the sockets in re-lamping, making lamp replacement a one-hand job; and to lock the lamp in the

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can't compare

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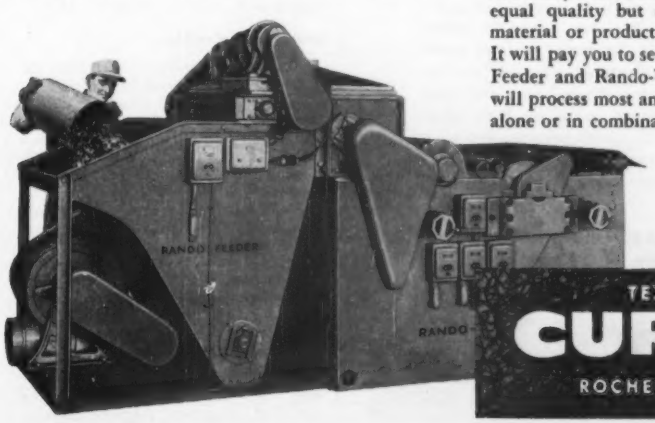
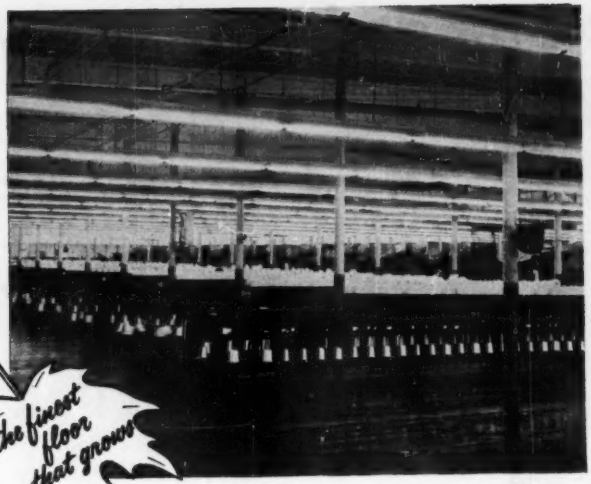
1. Dry processing, wherein plastic fibers are blended with other materials, or resin powders are introduced while web is being formed. As a final step web may be calendered or heat processed.
2. Wet processing. Webs can be treated by impregnating rolls or in a spray chamber.
3. Quilting. Random webs can be quilted by stitching or with a heat sealer.
4. Needle punching. This process is used when making rug cushions or floor mats.
5. Felting.
6. Heat Sealing. Random webs can be heat sealed to paper, crepe, kraft OR to a plastic film.

For many uses a Random Web may be superior to, or of equal quality but costs less, than a competitive woven material or product made in an entirely different manner. It will pay you to see and test webs produced by the Rando-Feeder and Rando-Webber . . . the textile machines that will process most any fiber (vegetable, animal or synthetic) alone or in combination.



Write today for detailed information on how you can have a web made from your own fiber. Curlator Corp., 586 Blossom Road, Rochester 10, N. Y.

TEXTILE DIVISION
CURLATOR
CORPORATION
ROCHESTER 10, NEW YORK



Floor of Northern Hard Maple in a New England mill. Photo by courtesy of Abbott Machine Co., Inc.

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will ALWAYS be MODERN!

Your mill floors of cheerful, long-lasting, *resilient* Northern Hard Maple afford the ideal setting for today's ultra-modern machine equipment. For the special needs of textile manufacture were the reasons that led you unerringly to choose "the finest floor that grows" when you planned your mill. Maple meets those needs today as always. Better than ever, in fact, for rigid **MFMA** grading and manufacturing standards assure you of Northern Hard Maple flooring true to dimension, to species and to character. Specify **MFMA** Northern Hard Maple. Its genial *resilience* means comfort underfoot and utmost resistance to dents and scars. Its dense texture and stability minimize crevices for dirt to lodge in. Easy brush cleaning, simple maintenance routine, are all it needs. In strips, blocks, patterned designs. Ask your architect or engineer.

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BEECH AND BIRCH

Useful Accessories (Continued)

sockets. No tools are required as the attachment is slipped over any standard 15- to 40-w. fluorescent socket and becomes a permanent part of the fixture. (U-4)

Fork-Truck Attachment

A new special attachment for fork trucks has been announced by Baker Industrial Truck Div., Baker-Rauling Co., 1250 West 80th St., Cleveland 2, Ohio. The Baker Rollover-Clamp is designed for installation on 4,000-lb. capacity Baker fork trucks. The object of the clamp is to make it easy to handle pallet loads of material on the forks, dump skid boxes with rotating head, and to use the forks as clamps for handling various other objects. A 4,000-lb. fork truck with the rollover clamp can handle loads up to 2,400 lb. with a length of 48 in. (U-5)

Heavy-Duty Metal Primer

A new metal primer that is said to work well with both active-solvent protective coatings and conventional paints has been announced by Prufcoat Laboratories, 50 East 42nd St., New York 17. Prufcoat primer P-50 is designed to be completely effective on the severely corroded surfaces so commonly found in process plants. It is not necessary, so the manufacturer states, to have ideal surface conditions, seldom found outside a laboratory. The overnight drying feature of the primer is of particular importance. (U-6)

Impulse Counter

A newly designed step-motor impulse counter to provide 100% accuracy up to 60 counts per sec. has been announced by the Special Products Div., General Electric Co., Schenectady, N. Y. The counter is designed to cover counting ranges above those possible with electro-mechanical counters and below those in which scalers are normally required. The device is said to be especially useful in high-speed production counting and in such applications as counting the number of flaws in fabric at process speed. Over-all dimensions are 13x11x7 in. Approximate weight is 12 lb. Operation is on 115 v., 60 cycle. (U-7)

Leak-proof Valve Seal

An innovation in the field of valve design has been announced by Rodic Chemical & Rubber Co., Allen Ave., New Brunswick, N. J. The Rand seal is said to operate on a new principle that makes possible a valve that is leak-proof, long wearing, easy to operate, and comparatively inexpensive to buy. The essential operation of the new seal is based on a working with, rather than against, the fluid flow. The manufacturer states that the cone-shaped seal is closed in the same direction as the movement of the liquid. Thus high or low pressures can seal the valve. (U-8)

Magnetic-Drive Speed-Control

A new controller for magnetic drives has been announced by Electric Machinery Mfg. Co., Minneapolis 13, Minn. The new E-M "Regutron" magnetic amplifier

L. F. Dommerich & Co., Inc.

Executive and General Offices

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NEW YORK 16, N. Y.

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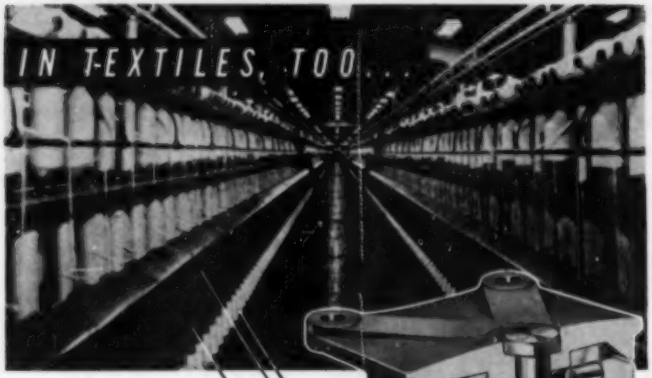

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GUARANTEED 20% GREATER ROLLABILITY

Useful Accessories (Continued)

control is said to give precise control of speed with no maintenance problems. The controller is designed to be used with the E-M adjustable-speed magnetic drive that gives variable speed output when used in combination with a constant-speed motor. The simplified magnetic amplifier control is said to eliminate all the complicated electronic circuits of previous electronic-type amplifiers. (U-9)

New Duct Furnaces

A new line of duct furnaces has been announced by Automatic Gas Equipment Co., 560 Brushton Ave., Pittsburgh 21, Pa. The Pittsburgh duct furnaces are designed for use in installations where the air supply and pressure originate at a source removed from the unit. The units are said to be ideal for use in air-conditioning installations where air ducts are already in place. Furnaces are supplied in sizes from 12,000 to 200,000-Btu. input per hr. and are shipped completely assembled with controls and built-in draft diverter. (U-10)

New Rotary Pump

A heavy duty vane-type rotary pump has been announced by Worthington Pump & Machinery Corp., Harrison, N. J. All models are the positive-displacement, sliding-vane type, in which pressure of liquid being pumped maintains contact of the vanes against the liner. The pumps are manufactured in both internal- and external-bearing design. External-bearing models are designed for non-lubricating liquids like gasoline and kerosene. Pumps are made with built-in relief valve in either standard-fitted, bronze-fitted, or all-bronze construction. (U-11)

New-Type Lightning Arrester

A new expulsion-type lightning arrester has been developed by Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa. The new De-ion, Type LX, is designed to protect distribution apparatus and incorporates a new method of limiting power-follow current on systems having fault currents as high as 20,000 amp. The heart of the arrester is a spiral-fiber filler that is said to provide longer arrester life and positive protection by lengthening the power-arc path to four times the original spark path. The Type-LX arrester is available in ratings of 3, 6, and 9 kv. (U-12)

Plastic Motor-Blowers

Plastic blowers for small totally-enclosed fan-cooled a.c. motors have been developed by Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa. The plastic blower is one-third lighter in weight than and is said to have many advantages over aluminum and bronze blowers. The blower is unaffected by chemical agents that attack metals. According to the manufacturer, this property makes the blower desirable for use where corrosive atmospheres may be present. Reports of tests also indicate increased resistance to abrasion with the plastic blower. (U-13)

Potential Measuring Device

A new potentiometer circuit that permits measurements of spans as narrow as

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★ **GIVES MULTI-MACHINE PRODUCTION WITHOUT "KNOCKING ITSELF OUT"**

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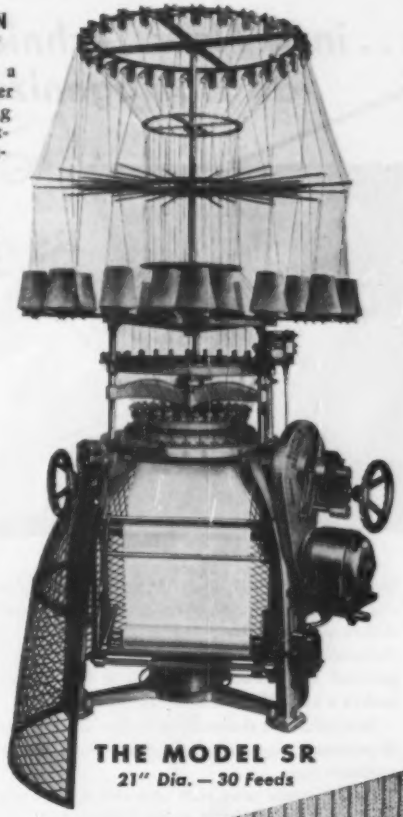

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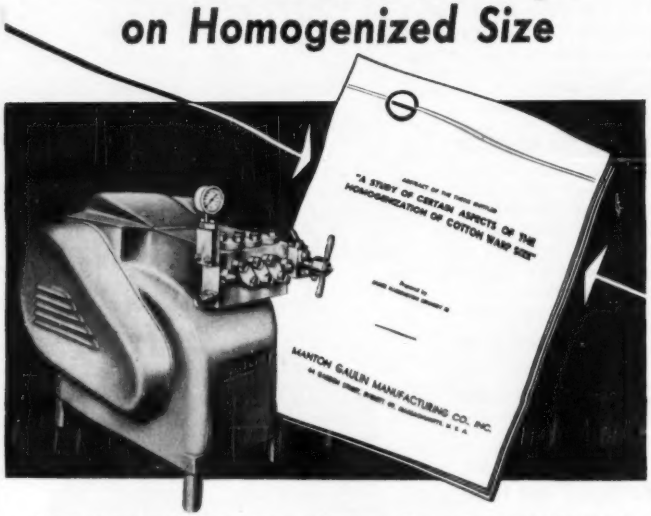
Facts Every Textile man Should Know!

. . . in a New Technical Paper on Homogenized Size



Here's an impartial, scientific comparison of homogenized and boiled size. It compares the strength and elongation of yarns made with the different sizes. Their degree of fiber lay . . . penetration . . . coating. Advances a new theory on bonding yarn fibers. Explains why homogenized size reduces shedding at the loom and at the slasher, and makes a yarn that weaves more efficiently.

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Useful Accessories (Continued)

100 microvolts has been developed by Minneapolis-Honeywell Regulator Co., Brown Instruments Div., Wayne & Windrin Ave., Philadelphia 44, Pa. The new narrow-span instruments are designed for accurate microvolt measurement of d.c. potentials. They are applicable for both laboratory and production line measurements. (U-14)

Powered-Roof Ventilator

A new powered roof ventilator, the "Whirlout," has been announced by Swartwout Co., Cleveland, Ohio. The new "straight-through" unit features simplified design and low over-all height without any sacrifice of efficiency. The ventilator is open only when its propeller is operating. The air stream is utilized to hold open two semi-circular halves of the damper while forcing unwanted elements out of the building. The new unit is supplied in a wide range of sizes and capacities and is completely weathertight at all times, according to the manufacturer. (U-15)

Paper-Towel Dispenser

An advanced design of a stainless-steel paper-towel dispenser has been announced by West Disinfecting Co., 42-16 West St., Long Island City 1, N. Y. The "Westroll" dispenser is said to save costs up to 50% for towel users in industrial installations. A hand-operated crank permits the user to wind out only the amount of Westroll paper toweling needed, about 17 in., compared with the 22 in. or more generally used on other types of dispensers. The reduction in length is reported to cut wastage to a minimum and to lessen litter in washrooms. (U-16)

Single-Pole Oil Switch

A new single-pole oil switch, type CSO-1, has been announced by Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa. Developed primarily for control of small banks of pole-mounted capacitors, the new switch is said to be well suited for various uses. The operating coils are interchangeable and provide 110-, 220-, and 440-v. control. Switches can be ganged mechanically or electrically for three-pole switching duty. The switch has been designed for 15 kv. and a thermal rating of 200 amp. (U-17)

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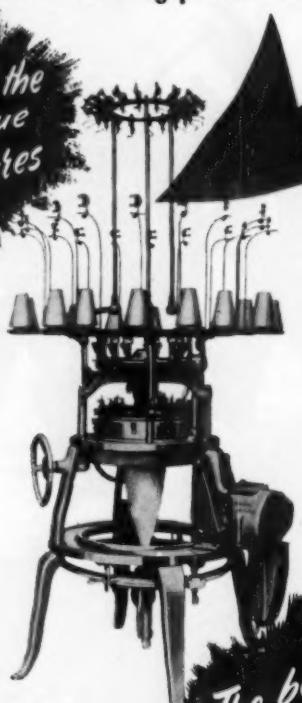

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Books of Interest

Textile Catalog Brought Up to Date

PREFILED TEXTILE CATALOGS 1951/1952, McGraw-Hill Catalog Service, 330 West 42nd St., New York 18; cloth, 528 pages, $5.

If you are in a position where you need to have at your fingertips a ready source of factual information on textile-mill suppliers of all types, you should have this latest revised edition of an old standby. The alphabetized buying data included cover everything in the field from machinery, equipment, and supplies to dyes and chemicals essential in the carding, spinning, knitting, weaving, and wet-processing branches of the industry.

Sections A and B have 336 pages of manufacturers' product descriptions, most of them illustrated. Section C includes catalogs of dye and chemical manufacturers and their products. Mill reference data—full of nomographs, charts, tables, and practical formulas for use in actual processing—are arranged in 80 pages in Section D. Section E has 88 pages of alphabetized product-manufacturers' names and addresses arranged under individual product headings.

Pocket-Sized Glossary Of Textile Terms

DAN RIVER'S DICTIONARY of Textile Terms, 6th Edition; by Dan River Mills, Inc., 1407 Broadway, New York 18; paper, 120 pages, no charge for single copies.

This pocket-sized glossary of textile terms has filled a real need since the first edition was brought out in 1944. Now, with the assistance of Isabel B. Wingate, Dean Richard S. Cox, Prof. Gilbert R. Merrill, Prof. A. H. Grimshaw, Dr. George E. Linton, John Hoye, and the Good Housekeeping Institute, the scope of the dictionary has been broadened to take in latest developments and terminologies in basic fibers, new finishes, and trademark names.

Handling Help Has Many Ramifications

PERSONNEL ADMINISTRATION, A Point of View and a Method, 2nd Edition, by Paul Pigors and Charles A. Myers; McGraw-Hill Book Co., 330 West 42nd St., New York 18; cloth, 614 pages, $6.

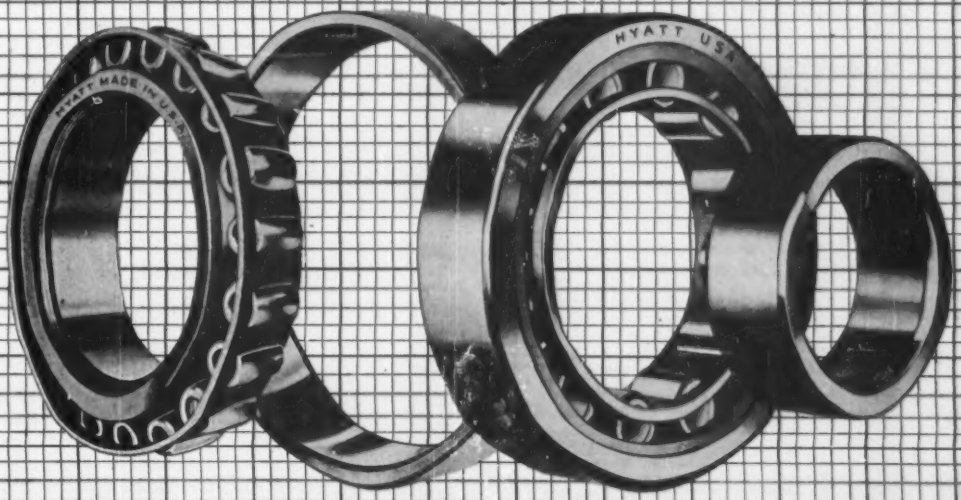
This book is addressed primarily to students, to persons just entering personnel positions in industry, and to personnel

Let Hyatts Help Protect Your Machine Investment

By reducing wear to a neglible minimum through the substitution of rolling motion for sliding friction, Hyatt Roller Bearings not only increase operating efficiency but also help lengthen the useful life of your equipment.

Applied in properly shielded housings to prevent oil leakage, these modern bearings save you money by reducing spoilage and at the same time effect other operating economies—including elimination of down time for machine repairs.

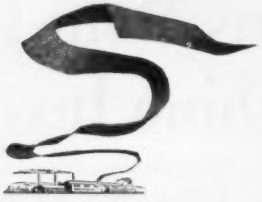
So to protect your machine investment and to produce more and better yarn or cloth at less cost, be sure to specify Hyatt Roller Bearings all around—for preparatory and finishing equipment as well as for your looms. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.



HYATT ROLLER BEARINGS

Good News!

Angus Mills in India are turning out growing supplies of the famous ANGUS BURLAP.



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Books of Interest (Continued)

administrators who wish to evaluate their own techniques and principles.

After a general discussion of the nature of personnel administration in Section A, the point of view is developed in three ways, no method of understanding being claimed as best. The why and hows of a viable personnel-policy system are also discussed. Part II of the book includes case material as illustrations.

Changes from the first edition include (1) more explanation on why responsibility for personnel relations rests with line management, (2) more emphasis on the need for and ways of working with union leaders, (3) more explanation on what the foreman can do in getting teamwork, and (4) more stress on evaluating the human problems involved in making changes in work assignments.

Textile Standards Revised by ASTM

ASTM STANDARDS ON TEXTILE MATERIALS (with Related Information), prepared by ASTM Committee D-13; American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.; paper, 597 pages, $5.

Textile specifications, tolerances, methods of testing, and definitions and terms are the broad categories into which the detailed information in this 1951 edition of a well known "must" book have been dovetailed.

This new edition includes in their latest form 88 specifications, test methods, and tolerances. Standards cover asbestos, bast and leaf fibers, cotton, glass textiles, rayon, silk, wool, pile fabrics, felt; and general fibers, fabrics, yarns, threads, and cordage.

Among other subjects covered are identification, qualitative and quantative analysis, pest and microorganism resistance, testing machines, humidity, stretch, snag resistance, and for the first time tentative methods of testing for resistance to abrasion.

Three valuable fact-packed appendices, a table of contents, and a test-methods index just about cover the subject of textile specifications from every other angle.

Economic Data Simply Presented

WHY LIVING IMPROVES, 17 x 22-in. wall chart in color; The Wilkie Foundation, 254 North Laurel Ave., Des Plaines, Ill.; ready for wall mounting or bulletin boards, 25¢.

Many books, because of their wordy presentation, obscure simple economic truths. The Wilkie Foundation has rendered a service in presenting a simple chart that successfully shows major economic factors in relation to all the others, from the year 1600 to the present day.

Living standards in the United States are graphically shown to be the highest in the world because mechanical energy has more and more replaced muscle power and has thus made possible a tremendous material expansion.

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For immediate shipment from Camden, New Jersey, direct to your plant. High-frequency electronic generators in sizes from 15 to 100 KW for dielectric heating, drying, sealing, and curing of textiles, plastics and rubber.

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To be used for_____
KW power required_____
Name_____
Title_____
Company_____
Address_____
City_____ State_____

AATCC Exhibit Report

(Continued on page 135)

▶ An electric indicating control with piloted-operated control valve in the range from 0 to 600° F. was shown at the booth of Sarco Co., Inc., 350 Fifth Ave., New York 1. The unit is installable on dyebecks and jigs.

A combined draining and air-venting-system unit for use on all sizes of dry cans was also described at the Sarco booth.

▶ The Marben-Process potentiometer for the evaluation of the amount of caustic and hydrosulfite that is used in the dyeing of vat colors was described at the booth of General Dyestuff Corp., 435 Hudson St., New York 14. The instrument, by measuring the tendency of the bath to give up electrons, can measure the power of the caustic and hydrosulfite and thus enable the dyer to avoid both over- and under-reduction and waste of raw materials.

▶ A new flex tester, the CSI-Stoll, for testing flex abrasion, bending, rolling, and folding was shown by Custom Scientific Instruments, Inc., P. O. Box 170, Arlington, N. J. The instrument is said to give reproducible results, and uses the automatic electrical end point. Tests may be run wet or dry. Tension load on the specimen and the load on the balance head are adjustable.

▶ "Depuma," an odorless, cream-colored defoaming agent for use with adhesives, emulsion, starches, and latex in processing liquids or pastes, was offered by American Aniline Products, Inc., 50 Union Square, New York 3.

The product does not depend entirely on its ability to decrease surface tension to be effective. It is said to have a more direct action on foam-producing elements in a solution or paste than the ordinary agent. Effectiveness is constant in a wide range of pH values, with no breaking down and no defoaming occurring.

▶ Experimental quantities of a new series of ether-type-struction nonionic surface-active agents, Pluronics L44, L62, L64, and L68, were offered at the booth of Wyandotte Chemicals Corp., Michigan Alkali Div., P. O. Drawer 11, Wyandotte, Mich. Suggested for use in applications where wetting, penetrating ability, detergency, and complete rinsability are required, the Pluronics, alone or compounded, are recommended for wool scouring, warp sizing, carbonizing, desizing, boiling off, dye leveling, soaping, and finishing.

"Kreelon" (sodium alkylarylsulfonate) and "Carbose" (sodium carboxymethylcellulose) were also featured at the Wyandotte booth. The former is a surface-active agent for use in either alkaline or acid media, alone or in combination. The latter powder has low viscosity and maximum solubility for use in warp sizing, desizing, and in azo-color printing in Carbose IM form.

▶ The following new wool-processing oils were offered by E. F. Drew & Co., Inc., 15

"Your JOINTS really solved a Problem for us!"

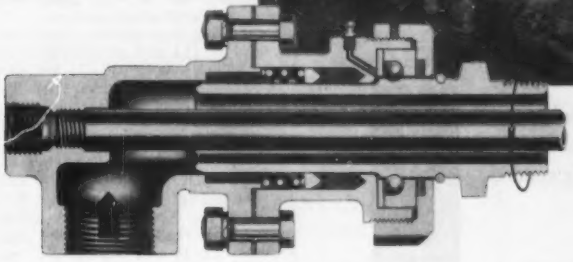
Says MAINTENANCE ENGINEER in this Mill

- Free-Floating, Low Torque Installations.
- Up to 50% Power Savings.
- Better Temperature Control.
- Low Maintenance, No Adjusting.
- All Parts Easily Accessible.

LOW TORQUE (freedom from friction drag) is the key to Barco's *"free-floating"* revolving joint installations. With this type of installation, Barco offers numerous advantages: power savings as high as 50%... very low maintenance requirements... quick, easy accessibility of parts... better temperature control... ability to withstand vibration and hard usage.

Take a look at Barco's new Type IBR Revolving Joint. Note the wide spacing between bearings which holds bearing loads and wear to a minimum. *Let us give you the complete story; ask for recommendations.* BARCO MANUFACTURING CO., 1834N Winnemac Ave., Chicago 40, Ill. In Canada: The Holden Co., Ltd.

Left: Ability to stand up under high speed and continuous duty has made these Barco Joints popular with the user.

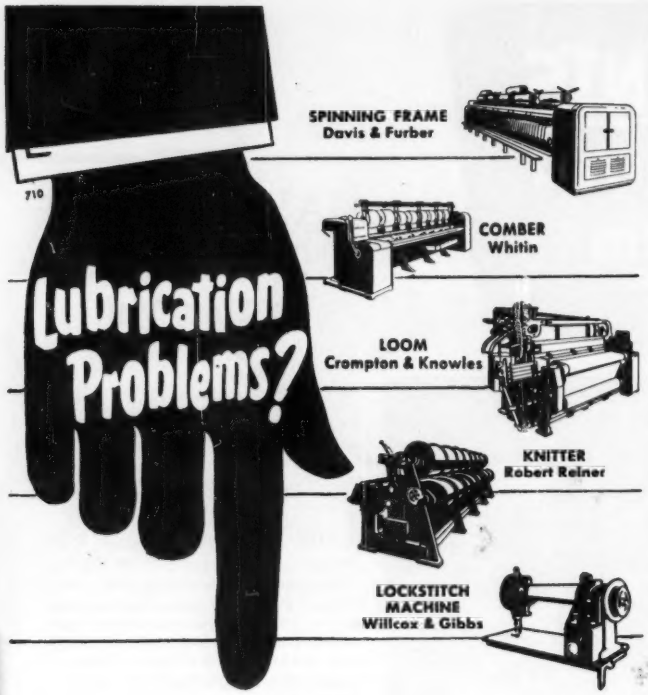


For complete information on this new Type IBR Revolving Joint, send for Bulletin 300.

BARCO *Revolving* JOINTS

For Textile Machine Dryers, Slashers, Dry Cans, Sanforizers

FREE ENTERPRISE—THE CORNERSTONE OF AMERICAN PROSPERITY



not on these machines!

...they're all BIJUR equipped

Each maker of these machines had your best interest in mind when he built-in a Bijur lubricating system. Human carelessness and forgetfulness are eliminated by machines having built-in Bijur lubricating systems. These machines will never be shut down because they lack continous, proper lubrication. Make certain the machine you buy is furnished with a Bijur lubricating system.

Write for Bulletin 6A

BIJUR

LUBRICATING CORPORATION

Rochelle Park • New Jersey

East 26th St., New York 10: Druspin M. I. X., an antistatic oil with aging and scouring-out properties; Druspin WL, for woolen carding and spinning; Druspin WSD, for application at top gill box to insure complete oil removal at scour; and Druspin S and Druspin RL, wool oils.

Wet-finishing products offered for the first time included Druso HV, MV, and LV, synthetic-detergent filling and scouring soaps of varying viscosities; and Druso AC and ML, respectively concentrated amino condensate for processes subsequent to carbonizing, and a non-ionic detergent for low pH use in acid filling and subsequent scouring.

▶ "Trinolex," a new alkaline scouring agent for knit-goods finishing, was offered by Commonwealth Color & Chemical Co., 3240 Grace Ave., New York 67.

▶ A new type of polyacrylic-acid size for single-end sizing of nylon tricot yarns, known as "Acrysol A-3," was offered to the trade at the booth of Rohm & Haas Co., Washington Square, Philadelphia 5, Pa. Constant viscosity in sizing (no jelling or precipitation) is said to give uniform application on the nylon yarn and to result in excellent adhesion, maximum yarn production, and high knitting efficiency. The sizing material is readily removed by scouring.

Properties of "Acrysol A-3" include 25% polyacrylic-acid active ingredient, 0.96 specific gravity, 3 to 4 pH (use concentration), and 60 to 65 SUS viscosity at 78° F., and 7% solids.

▶ "Dileine Concentrated," an anti-fume agent for application with acetate colors, was featured by Jacques Wolf & Co., Passaic, N. J. Stable at usual dyeing temperatures, the inhibiting agent, added right to the dye-bath, is said to assure excellent resistance to atmospheric gas fading.

▶ "NCF Paste," a durable urea-formaldehyde crushproof-finish resin, was offered at the booth of Onyx Oil & Chemical Co., 190 Warren St., Jersey City 2, N. J. Good on cotton and rayon fabrics, the product also reduces shrinkage in spun-rayon fabrics and provides hands with varying degrees of springiness.

Outstanding characteristics of the resin are cited as (1) ease of solubility, (2) good handling consistency, (3) less odor development, (4) good storage stability, and (5) good hand.

▶ Mitin FF Conc., a durable wash and dryclean-proof mothproof for simple application to wool simultaneously with dyestuffs, was featured by Geigy Co., Inc., 89 Barclay St., New York 8. A coal-tar derivative described as having the characteristics of an acid fulling dye, the product belongs to the dichloro-diphenyl-urea group of complex organic compounds. The treatment, used steadily abroad, does not affect fabric hand.

▶ Three new starches, "Nu-Film," "Napon," and "Kojel," were offered at the booth of National Starch Products, Inc., 270 Madison Ave., New York 16. "Nu-

WYANDOTTE ANNOUNCES

Another FIRST!

KREELON CD

the only promoted industrial detergent on the market!

It's a fact! Kreelon* CD is the first promoted industrial detergent ever offered in one product —the only product of its kind on the market today. Developed by Wyandotte and available only at Wyandotte, it combines the advantages of an excellent synthetic detergent and an excellent detergent-promoter.

What does this mean to you? If cotton's your line, you'll find that Kreelon CD will do a far superior job for your scouring, kier boiling, after-soaping and in other phases. It imparts superior soil removal properties . . . provides greater prevention of soil redeposition . . . will give much brighter color. And if you're in wool, silks or synthetics, you'll find Kreelon CD excellent for your processing operations.

Strong claims—yes, but we can back them up. Let us show you how the use of Kreelon CD can save you time, trouble and money. We'll be glad to work with you—no obligations, of course. Get the jump on competition—write us today.

Fast facts about Kreelon CD

- Kreelon CD can be substituted for the anionic detergent you're now using—and you'll get 20% to 70% improvement in soil removal and whiteness retention.
- Kreelon CD dissolves rapidly—is easy to use, fast-acting. It is also dustless.
- Kreelon CD is economical. A promoted detergent containing Carbose*, it gives you the advantages of a synthetic detergent and detergent-promoter in one product. It's ready to use – saves you storage space, handling and mixing time.
- In the processing of cotton, Kreelon CD is far more efficient than any synthetic detergent alone. It delivers superior results in scouring, kier boiling, dyeing, bleaching, desizing and finishing.
- In the processing of wool, Kreelon CD is highly effective in raw wool scouring, carbonizing and dyeing. In silks and synthetics, it is recommended for desizing, bleaching and scouring.

*Reg. U. S. Pat. Off.

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA
CALCIUM CARBONATE • CALCIUM CHLORIDE • CHLORINE
HYDROGEN • DRY ICE • SYNTHETIC DETERGENTS • GLYCOLS
CARBOSE (Sodium CMC) • ETHYLENE DICHLORIDE • PROPYLENE
DICHLORIDE • AROMATIC SULFONIC ACID DERIVATIVES
OTHER ORGANIC AND INORGANIC CHEMICALS

Wyandotte CHEMICALS
REG. U. S. PAT. OFF.
Wyandotte, Michigan
OFFICES IN PRINCIPAL CITIES

DARNELL
CASTERS & WHEELS

For light or heavy duty service Darnell Casters and Wheels are made for a long life of trouble-free usage, to protect floors and increase employee efficiency.

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DARNELL CORP. LTD.,
LONG BEACH, CALIFORNIA.
60 WALKER ST., NEW YORK, N. Y.
36 N. CLINTON, CHICAGO, ILL.

Always SWIVEL and ROLL

Film" is a non-congealing, non-crusting size for spun rayon, worsteds, and cotton. "Napon" is a starch stabilizer, binder, and plasticizer for printing, finishing, back filling, and warp sizing. Used as an additive, it retards congealing. "Kojel" is a cold-water-swelling printing thickener for both vat and stable azoic-compound dyes.

▶ A continuous cold-water shrinking unit and dryer, for the relaxation of worsteds and some hard-finished woolens before cutting, was offered at the booth of David Gessner Co., 41 Fremont St., Worcester, Mass.

Cloth runs continuously over a steam box, into a two-section water dip tank, through two pneumatically operated squeeze rolls, and into a traveling scray to sweat for 20 min. before it enters the drying chamber.

▶ Overhead enclosures for jigs and dyebecks are a new feature in the Glasco Equipment Co., 10 Wait St., Paterson, N. J., line shown at the show. In widths varying from 2 to 20 ft., depending on individual needs, and with built-in coils for the even maintenance of the 210 to 212° F. temperature range, the new enclosed becks are 9 ft. 8 in. long and 9 ft. 3 in. high. Only the upper enclosure lid is available seperately.

▶ Scour Bleach No. 2, a new scour and bleach compound for use in nylon and rayon, has been developed by Richmond Oil, Soap & Chemical Co., Inc., 1041-43 Frankford Ave., Philadelphia 25, Pa. This material is particularly effective on both spun nylon and spun rayon. The bleaching action is quite mild but effective. The scouring action is said to be as good as any scour normally used.

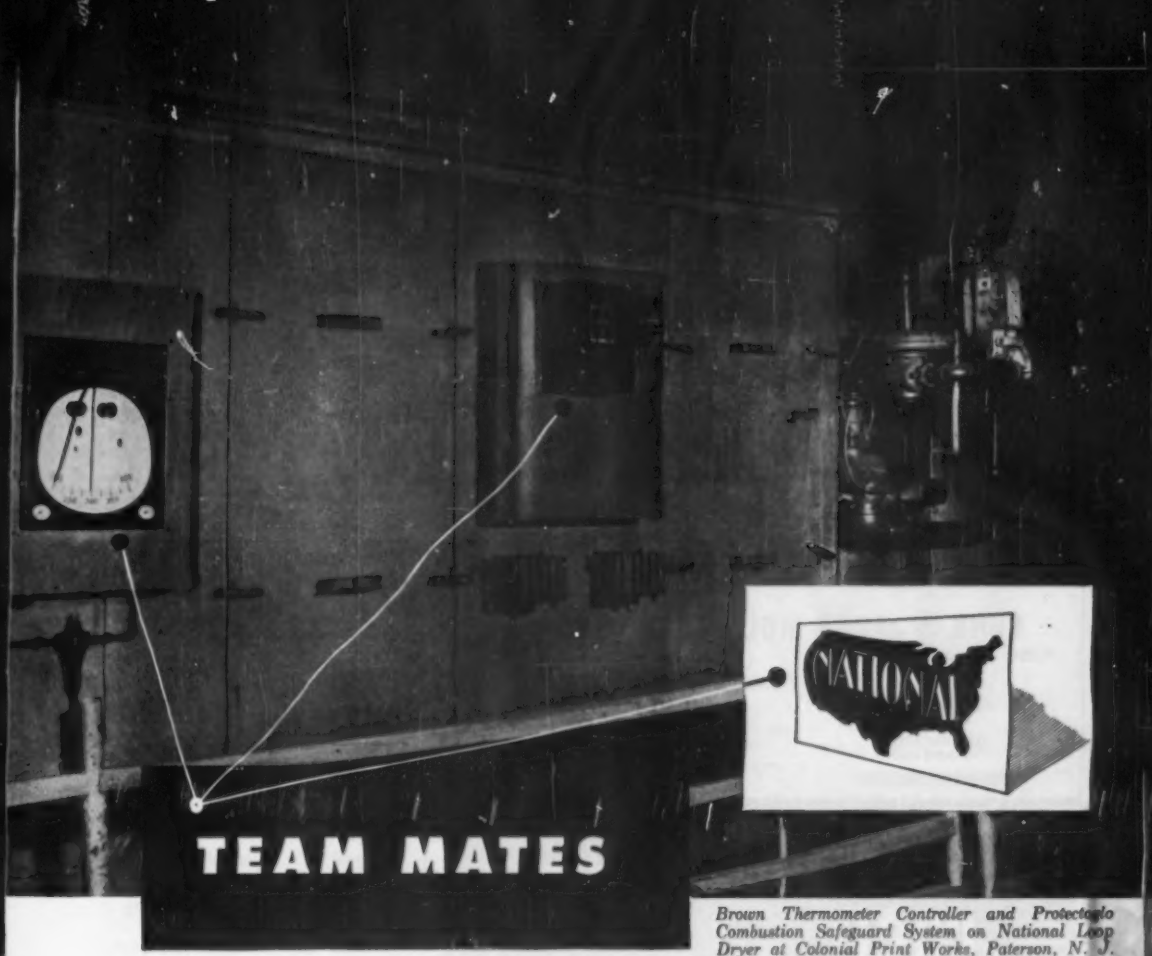
In combinations of wool with the synthetic fibers, Scour Bleach No. 2 provides an efficient scour that will not harm the wool.

▶ Dynesol F-20, a new wetting and rewetting agent, has been developed by Amalgamated Chemical Corp., Philadelphia 39, Pa. It can be used as a wetting-out agent, a kier assistant, a bleaching assistant, an aid in finishing and in Sanforized shrinking.

The agent is effective in low concentrations, and is completely soluble in water of all degrees of hardness. It is an anionic compound. The activity of Dynesol F-20 is not materially impaired by increases in processing temperatures. It is also soluble to acids, alkalis, and salts, and has a low foaming power.

▶ Dynadye VX, a solution of a sodium salt of a complex phenol combined with suitable surface active agents to make it an effective dyeing assistant for the processing of Dacron yarns, knit goods and fabrics, was shown by Amalgamated Chemical Corp., Philadelphia 34, Pa.

Dynadye VX has been used successfully in the commercial dyeing of Dacron in various forms. Yarn has been successfully dyed on package machines. Hosiery and sweaters have been dyed in the usual hosiery-dyeing equipment. Selected



TEAM MATES

Brown Thermometer Controller and Protectoglo Combustion Safeguard System on National Loop Dryer at Colonial Print Works, Paterson, N. J.

. . . for greater drying efficiency

OPTIMUM efficiency for textile fiber or fabric drying is dramatically illustrated by the combination of a gas-fired National Loop Dryer and modern instrumentation.

Equipped with a Brown Thermometer Controller and a Brown Protectoglo Combustion Safeguard System, the dryer maintains ideal processing conditions at all times—*regardless of outside temperatures and humidity.*

The speed with which goods are processed, the high uniformity of processing, the excellent heating economy, the ability to eliminate constant supervision . . . all are tributes to the high sensitivity, accuracy and close reproducibility of control of Brown instrumentation, as well as of the design and construction of the National Dryer. The efficiency of Brown instruments and controls on this equipment is duplicated on dryers of all types, and for all mediums throughout the industry. And the same efficiency is carried through in Brown instruments for other operations . . . such as sizing, slashing, boiling, dyeing. Whatever your requirements, get the *right* instrument or control system to fit *your* individual needs. Call in our local engineering representative. . . . Write for Catalog 6708 and Specification Sheet 600.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4509 Wayne Ave., Philadelphia 44, Pa.

MINNEAPOLIS
Honeywell

Brown Instruments

PLASTIC BOBBINS
...made-to-order!

Something new! Plastic bobbins, spindles and tubes made to your specifications. Get the design your needs require. Just let us have your specifications. A plastic product may solve your bobbin problem.

We are expert die makers, and mold all types of products that demand accurate balance and great mechanical strength for high speed operation. Investigate our "made-to-order" service—Write or Call Trenton 4-5391.

KUHN & JACOB MOLDING & TOOL CO.
1200 Southard Street Trenton 8, N. J.

CONTACT THE K & J REPRESENTATIVE NEAREST YOU

S. C. Ullman, 55 W. 42nd St., New York, N. Y.
Telephone — Penn 6-0346

Wm. T. Wyler, Box 126, Stratford, Conn.
Telephone — Bridgeport 7-4293

Wm. A. Cheiverus, Philadelphia, Penna.

Cut Your Materials-Handling COSTS with Roll-Easy Colson Casters

Model 3-408-16 caster with thread guards, designed especially for the needs of the Textile Industry.

Rolling stock that doesn't roll easily cuts efficiency and profits in your mill. Colson *specializes* in wheels and casters engineered for the Textile Industry. They roll easily over all floors, are rust-resistant—many models have thread guards. Colson also manufactures a wide range of trucks for the Textile Industry—hand trucks, platform trucks, box trucks, drum and barrel trucks and special devices. Write us or consult your phone book for the Colson representative near you.

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THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • • LIFT JACK SYSTEMS • • INDUSTRIAL TRUCKS

acetate dyestuffs and ordinary dyeing conditions have been found suitable for processing the Dacron. No difficulties have been encountered in obtaining excellent went and dry crockfastness and extreme depth of shade.

▶ Filaseal softener FA, a reaction product of an alkyl amine and a substituted hydantion, said to import a full, soft hand to fiber, yarn, or fabric was introduced by Amalgamated Chemical Corp., Philadelphia 34, Pa.

Filaseal softener FA can be used in small amounts, as little as 0.2% being adequate to effect a marked improvement in hand on most fibers. On very harsh materials it may be necessary to use up to 2.0%.

Filaseal softener FA is an exhausting type of softener and may, therefore, be applied either from a quetsch or a long bath. It may be applied to almost any temperature, but in practice temperatures in the range of 110 to 140° F. have been found to be very satisfactory.

Filaseal softener FA is useful for softening most textile fibers. It can be used on wool, cotton, rayon, nylon, Vicara, dynel, Orlon, and Dacron.

▶ Four new substantive softeners, the Ampital series, for obtaining a soft hand on cotton, acetate, viscose, and nylon were introduced by Dexter Chemical Corp., Textile Chemical Div., Box 1, Blvd Sta., New York 59, N. Y. The new products are also said to overcome the troubles sometimes experienced with use of cationic agents.

Ampital A is an anionic softener for permanent softening of cotton, acetate, viscose rayon, and nylon where maximum whiteness or resistance to light fading is important.

Ampital KZA is said to precipitate, under normal conditions, with anionic or cationic substances. It can be used with acids, alkalis, resins, and copper salts to produce an unusually soft hand. The product will be useful in producing a variety of effects in processes that heretofore had to exclude the use of a substantive softener.

Ampital KZ3H combines the advantages of the two previously mentioned products and produces a high degree of softeners. It can be used where maximum whiteness or resistance to light fading is important, and can be applied directly in the dyeing operation and with other substances that might cause trouble with conventional softening agents.

Ampital ZR is a true cationic softener substantive to cotton, acetate, viscose rayon, and nylon. It can be used to produce a permanently soft hand and to prevent chafe marks and processing damage to rayons and nylon.

▶ Trenisol resin finishes were featured by Alco Oil & Chemical Corp., Trenton Ave. & William St., Philadelphia 34, Pa.

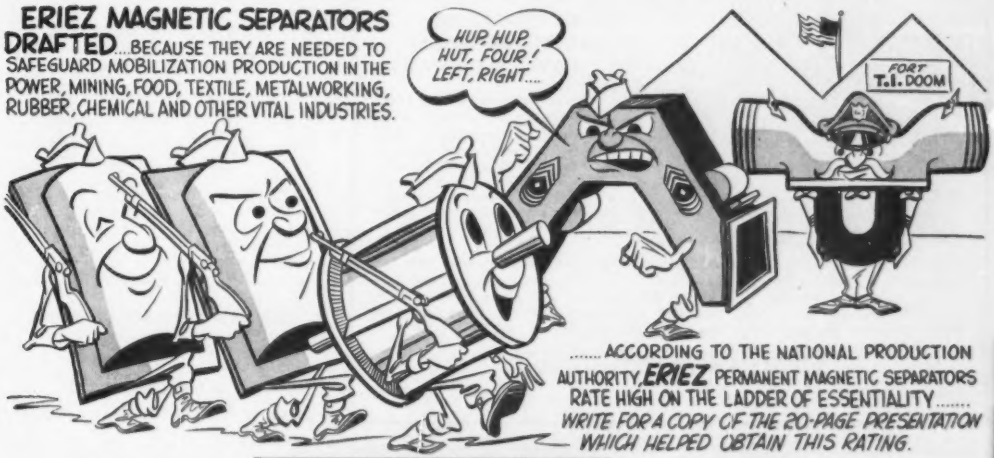
The Trenisols are supplied for use in spraying, coating or impregnating, and they may also be used in backfilling as binders for starch and talc. In coating applications, the Trenisol viscosities are

ERIEZ MAGNETIC ATTRACTIONS

ERIEZ MANUFACTURING CO., ERIE, PA., U.S.A. • PRODUCERS OF MAGNETIC SEPARATORS AND SELLERS OF (RCA) ELECTRONIC METAL DETECTORS

ERIEZ MAGNETIC SEPARATORS DRAFTED

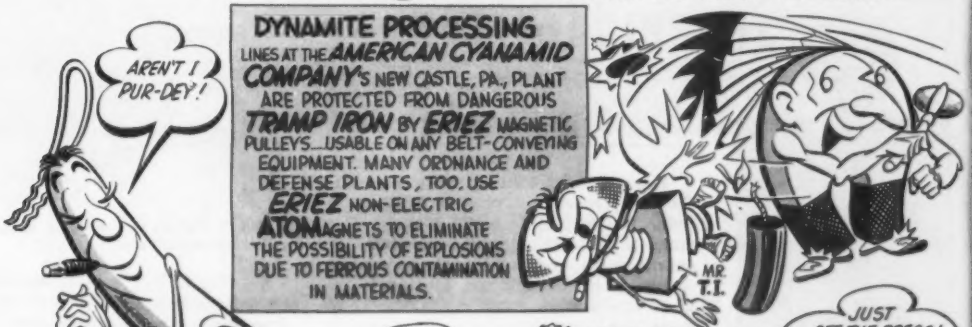
....BECAUSE THEY ARE NEEDED TO SAFEGUARD MOBILIZATION PRODUCTION IN THE POWER, MINING, FOOD, TEXTILE, METALWORKING, RUBBER, CHEMICAL AND OTHER VITAL INDUSTRIES.



.....ACCORDING TO THE NATIONAL PRODUCTION AUTHORITY, ERIEZ PERMANENT MAGNETIC SEPARATORS RATE HIGH ON THE LADDER OF ESSENTIALITY..... *WRITE FOR A COPY OF THE 20-PAGE PRESENTATION WHICH HELPED OBTAIN THIS RATING.*

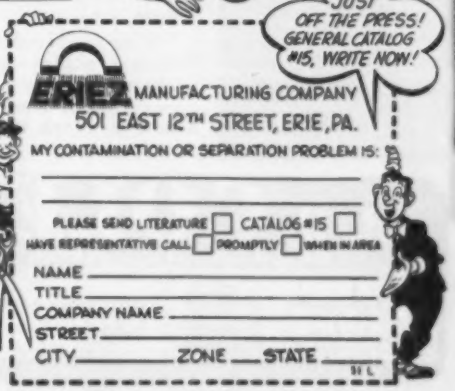
DYNAMITE PROCESSING

LINES AT THE AMERICAN CYANAMID COMPANY'S NEW CASTLE, PA., PLANT ARE PROTECTED FROM DANGEROUS TRAMP IRON BY ERIEZ MAGNETIC PULLEYS...USABLE ON ANY BELT-CONVEYING EQUIPMENT. MANY ORDNANCE AND DEFENSE PLANTS, TOO, USE ERIEZ NON-ELECTRIC ATOMAGNETS TO ELIMINATE THE POSSIBILITY OF EXPLOSIONS DUE TO FERROUS CONTAMINATION IN MATERIALS.



DO CIGARS WEAR BOBBY PINS?...

NOT EXACTLY, BUT A CIGAR-MAKER FOUND 'EM A PROBLEM IN HIS FINISHED PRODUCT. SOLUTION: AN ERIEZ PLATE-TYPE ATOMAGNET ON THE FINAL BELT CONVEYOR SNATCHED OFF ANY CIGARS IN WHICH TRAMP IRON REPOSED. WORKS LIKE A CHARM ON OTHER PRODUCTS, TOO!



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501 EAST 12TH STREET, ERIE, PA.

MY CONTAMINATION OR SEPARATION PROBLEM IS:

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HAVE REPRESENTATIVE CALL ☐ PROMPTLY ☐ WHEN IN AREA

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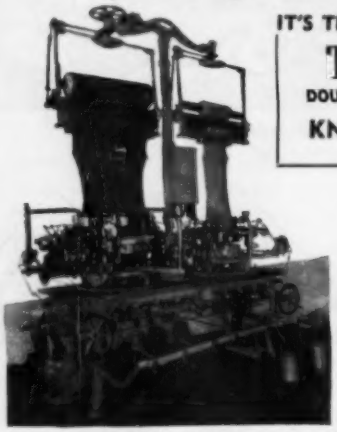
M L

SAVES ON WASTE

by reducing cloth imperfections!



IT'S THE NEW

TOMPKINS

DOUBLE HEAD SPRING NEEDLE

KNITTING MACHINE

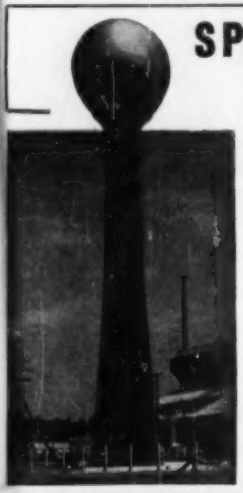
SAVES ON LABOR!
SAVES ON WASTE!
SAVES ON NEEDLES!

Cutting out imperfections from knitted cloth has always been time-consuming and costly. *New* stop motion and furnishing wheels on the NEW TOMPKINS DOUBLE HEAD MACHINE provide knitters with a much welcomed solution! *Imperfections are caught before they get into the cloth!*

New five-speed individual drive motors for each head provide easy, quick changes. Stop motion is conveniently located below the table—with nothing in the operator's way for removing cylinders or take-up! You get new speed and new economy PLUS the versatility of fabrics (fine silk underwear to heavy overcoating) for which Tompkins machines have been world renowned since 1846!

TOMPKINS BROS. CO.

623 ONEIDA ST. SYRACUSE 4, N. Y.



SPHERICAL TANKS on Tubular Towers

• The COLE Spherical Tank on Tubular Tower is a pioneer in its field. We design and erect special tanks of this character. It provides an attractive and serviceable unit —economical to maintain, efficient in service and pleasing in appearance.

Write for special booklet on these modern welded Spherical Tanks which provide gravity water pressure and for copy of latest Cole catalog—"Tank Talk."

R. D. COLE MFG. CO.

NEWNAN, GA. Established 1854

TANKS TOWERS CYLINDERS VESSELS

adjusted so that the proper coating is obtained, depending on fabric construction and available equipment. The choice of resin, plasticizer, wetting agent, thickener, or other compounding ingredients will also vary depending upon the nature of the particular type of finish desired.

The Trenisols will produce a variety of effects ranging from a soft, drapey hand to a stiff, firm hand on flat goods. The same effects can also be imparted to other types of fabrics. In addition to the changes of hand made possible, the Trenisols are said to add binding properties and strength to the fabric.

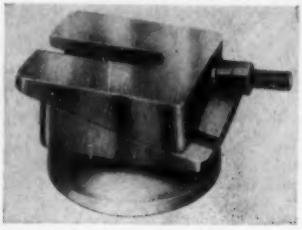
▶A new Cravanette Super Long-Life water repellent for use on nylon, Orlon, acetate, viscose rayon, cotton, and blends of these fibers was introduced by the Cravanette Co., U.S.A., Hoboken, N J. The new finish is a resin, dispersible in water. It can be applied in a single step, and no neutralizing or second drying is necessary.

The new product is durable to washing and dry cleaning. The water-repellency rates 100 after 10 dry cleanings and 70 or better after three washings.

Textile Equipment News

(*Continued from page 166*)

Wedge-Leveling Blocks Insure Machine Alignment



LEVELING BLOCKS are available in four models for varying needs.

The Gy-A-Liner, a wedge-leveling block available in four models for different uses, has been developed by Gy-A-Liner Mfg. Co., 20 Tobin Ave., Revere, Mass. The leveling block can be used for leveling of machines bolted to the floor and when it is necessary to have a driving or other shaft working on a true center.

The leveling block is said to provide a firm, level base and a quick means of realignment whenever required. Socket pivoting plates and take-up mechanism permit semi-automatic self-aligning up to a 2° angle.

Sizes vary from 3x5¼ in. to 4¼x4¼ in. Maximum heights are from 1¾ to 2¼ in. Loads that can be handled by various models of the block are from 5,100 to 10,000 lb.

(*Continued on page 226*)

. . . for proof of better pumping performance!

It's been said that split-case centrifugal pumps look pretty much alike. But looking alike does not mean "like" performance!

We've lifted the casing of a Fairbanks-Morse Single-Stage Split-Case Centrifugal to show you why you get *better* performance . . . *lower* maintenance costs with Fairbanks-Morse . . . to show you important design and manufacturing differences.

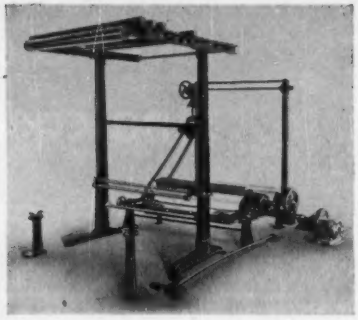
Note the sturdy construction and exceptional strength provided by the arched casing and solid pump base . . . the ease with which the entire pump can be inspected or the entire rotating element removed without disturbing driver or pipe connections. Exceptionally smooth water passages reduce friction and "back eddies" to the minimum. Bearing brackets, cast integrally with pump body, maintain accurate, permanent alignment of shaft and impeller. Smooth, one-piece impeller reduces wear and maintains efficiency. Impeller is pressed on shaft over a key so that the key also drives the shaft sleeves and prevents destructive rotation of the sleeve on the shaft. Removable casing and impeller wearing rings assure easy maintenance and have streamlined water guiding surfaces for maximum pump efficiency.

These are but a few of the many performance-making features you'll find in Fairbanks-Morse Centrifugals. Your Fairbanks-Morse Pump expert will be happy to give you the complete story on these efficient, economical pumps. See him or write Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE,

a name worth remembering

PUMPS • SCALES • ELECTRIC MOTORS
GENERATORS • LIGHT PLANTS • DIESEL,
DUAL FUEL AND GASOLINE ENGINES



Type DS Rolling Machine

This has two wooden or metal drums 9" diameter on which the cloth roll rests. Long racks on each side put weight on the ends of the winding roll or arbor. Both racks are simultaneously raised or lowered by means of a hand wheel. A friction device at the top enables any desired amount of pressure to be exerted to make a smooth hard roll. A measuring attachment, spreader roll, screw rolls or other attachments may be added, as required, similar to the cut shown above.

This machine may be run independently either with T & L pulleys or by motor drive, or in connection with another machine.

A roll of cloth 48" diameter can be put up on wooden winding rolls, wooden or steel shells, or paper tubes.

Built in different widths.

Send for our Bulletin No. 259B.

Curtis & Marble
MACHINE COMPANY
WORCESTER, MASSACHUSETTS

Sterling
Ring Travelers

SERVICE

Sterling's practical Service Engineers can also help you control your Traveler inventory.

Keep costs down and production up by consulting with us before making large purchases.

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D. R. Ivester	Box 882	Clarksville, Ga.
T. B. Farmer	Box 150	Langley, S. C.
J. S. Furtado	Box 903	Fall River, Mass.

STERLING RING TRAVELER CO.
FALL RIVER, MASS.

(Continued from page 224)

Accessories for Instron Tester Improve Versatility

INSTRON TESTER now has compression-testing attachment.

Versatility in testing is the keynote of several accessories announced by Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass. Compression testing is now possible.

An auxiliary crosshead is attached to the frame below the moving crosshead. Compression-type load cells have a rigidly attached load-sensitive table. The sample is compressed between this table and the crosshead.

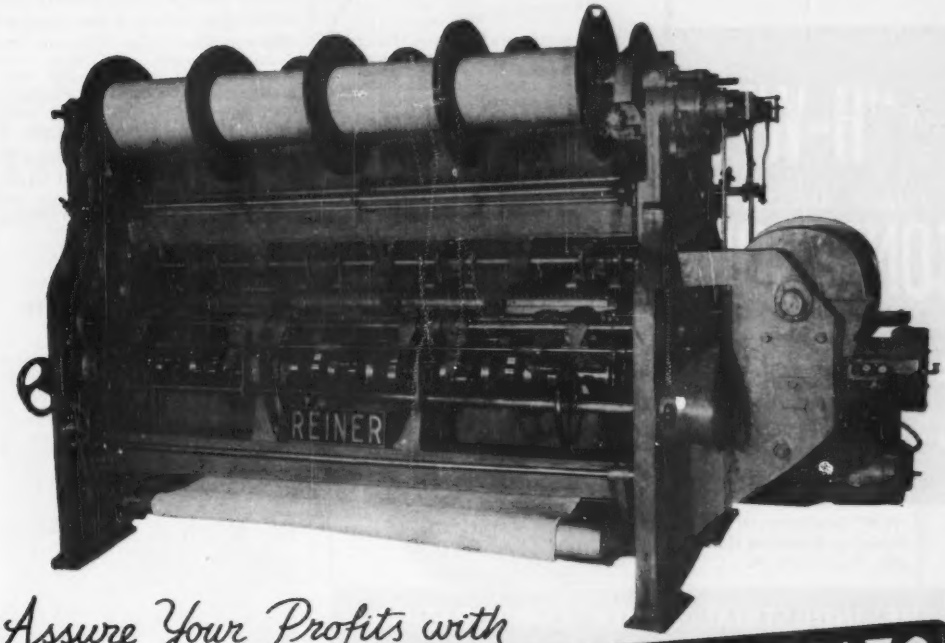
Load-deformation, cyclic, and relaxation data can now be obtained for compression testing as well as tensile testing. Mechanical properties of the test specimen can be further evaluated by the use of simple jigs and fixtures to carry out torsion and flexural measurements.

The full scale of compression tests available, with three interchangeable load cells, is from 20 g. to 5,000 lb.

Another accessory recently developed is an integrator that, through readings on a counter, gives the area under the load-deformation curve. This area is a measure of the energy either absorbed or returned by the test sample. The integrator can also be applied to other tensile and compression testers.

Heat Exchanger Resistant to Corrosion

A newly designed heat exchanger, developed in Great Britain, is now available in the U. S. through British American Carbon Corp., 18 E. 48th St., New York 17, N. Y. The unit



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For highest quality sueded gloves — swim suits — sport shirts — sport jackets — sport shoes — bed jackets — hand bags — slip covers — night gowns — dinner jackets — dresses — riding vests, etc. . . .

The Reiner Simplex Machine is a reliable, sturdy and economical producer with an excellent mill performance record. Knitting width 84"—Pattern wheel or chain link drive; many other features, all tending to ease operation and to produce at highest speeds the finest simplex fabrics ever made.

When buying from Reiner you are assured of quality. Moreover, Reiner offers all types of Warpers and Creels, enabling you to purchase your complete warp knit mill equipment from one source. You will do well to check up on Reiner machines before you buy anything else. Write for richly illustrated catalogs.

THE REINER LINE: *2 and 3 bar Tricot Machines—Raschel Machines—Kaylooms—Simplex Machines—Full width and sectional Warpers—All types of Creels—4 section Full Fashioned Hosiery Machines (Twin Knitters) up to 66 Gauge—Automatic Schiffli Embroidery Machines, 10 and 15 yards—Bobbin Winding Machines, for quilting and stitching. Ready Spare Part Service for all Reiner equipment.*

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"H-W" Conditioners for Nylon Hosiery are used in mills everywhere. Typical results: increases yield of perfects approximately 15 percent . . . eliminates picks and pulls and reduces snags to a minimum . . . speeds seaming and looping; greatly increases production in these operations . . . minimum maintenance . . . pays for itself in a short time.

Write for Bulletin H1.

"H-W" Conditioner for Nylon Hosiery in Langhorne Hosiery Mill, Phoenixville, Pa.

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Accurate readings obtainable without special skill. Psychrometric readings can be taken at any point desired however inaccessible.

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3" x 5" charts, 10 or 30 hour records. Modern design...handy for small space and difficult locations . . . built to meet unusual conditions.

Model 594
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Model 573
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Model S/1
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A small, low cost instrument. Thermometers graduated in 1° increments from +35° F to +110° F. Furnished complete with case and psychometric slide rule.

Model 550
Sling Psychrometer
Manufactured to U. S. Weather bureau specifications. Thermometers graduated in 1° increments from −20° F to +120° F, or −35° C to +49° C.

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DIVISION OF
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consists principally of a compact cube of Delanium carbon, a new elemental carbon product. The Delanium heat exchanger is much smaller than a conventional heat exchanger of comparable performance. It is of rugged construction and can be installed readily either singly or in banks. It is said to be particularly useful with corrosive liquids such as most alkalis, salt solutions, organic chemicals, and all except the most highly oxidizing acids.

Water-Bath Temperature Held to 0.005° C.

HEATING AND STIRRING are accomplished from the bottom of the bath. The top is clear for insertion of samples.

Precise control of water-bath temperatures within ±0.005° C. over the range from −5 to +107° C. is claimed for the new Isotemp bath developed by Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

A complete design change from the conventional water bath employs an electronic circuit to control a 400-w. and an 800-w. heater. Also the heating elements, stirrer, and controls are contained in a central column with all connections made through the bottom of the 15x15-in. Pyrex glass bath —thus providing an unobstructed top surface for inserting samples.

Stirring is done by a 1,1500-rpm. motor and propellers so that the entire 10-gal. water (or light mineral oil) content is constantly in motion.

The new bath is housed in a cube-shaped case with an opening in front for observation of samples under test. The back portion and bottom of the bath have been ground and are illuminated from below with fluorescent lamps for maximum visibility. Sam-

A new method for cleaning spindles utilizes a solvent originally developed to remove carbonized oil deposits from airplane and diesel engines.

--Textile Industries

The Tymatic bow spinner developed by Burlington Mills makes decorative ribbon bows and pompoms automatically and speedily.

--Business Week

Good design consists in doing something with a fabric, not to it.

--Dorothy Liebes, textile designer

The value of British fabric exports to the U.S. dropped during September, for the first time reversing the trend since devaluation.

--Daily News Record

U.S.Rubber Co. has developed a plastic yarn-carrying quill which it claims will wear 2 to 3 times longer than wooden types.

--Textile Age

Dyeing of solid shades on fabrics composed of blends with new synthetic fibers still represents largely unsolved problems.

--AATCC Symposium

I marvel at this cloth of softest strand...
What cunning art did guide the maker's hand?

--Chaucer, Canterbury Tales

He was furnished with a Hunter....
(advt.)

--Shakespeare, As You Like It

Favorable experience with granolithic-topped cement floors in weave rooms and wet-processing areas has prompted Springs Cotton Mills to install these floors extensively.

--Textile World

There is a present shortage in the United States of some 60,000 engineers.

--Fortune Magazine

Cuts in allotments for the first quarter will force the textile machinery industry to cut back production about 45 per cent from 1951 rate of output.

--Daily News Record

A new device, the Daylighting Nomograph, makes possible the prediction of how much daylight will be present in a room before the building is constructed.

--Pittsburgh Corning Corp.

Education is a factor in headache. Among college-trained people, 77.2 per cent reported they had headaches; among farmers, 50 per cent, and laborers practically none at all.

--Annals of Allergy

A study made for the U.S.Dept. of Agriculture by Ralph E. Loper Co. and the Carded Yarn Assoc. shows how a mill spinning cotton yarn can reduce costs 30 per cent or more.

--Textile World

A new robot operator for sectional overhead doors can be operated by magnetic remote control from cars or trucks.

--Manufacturer's Bulletin

Fabrics containing Acrilan will probably be initially introduced in men's suitings.

--Daily News Record

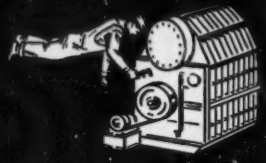
News from the field

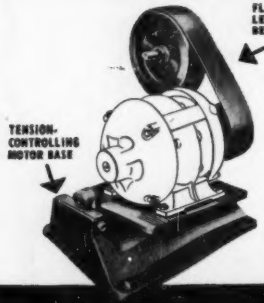
These Type S Stainless Steel Dye Kettles were recently installed at Bachmann Uxbridge Worsted Corp., Uxbridge, Mass. These ultra-modern kettles will dye or bleach woolens, worsteds, pile and plush fabrics, cottons, blankets, etc. — with perfect results, at high speeds and at extremely low cost. Write for Bulletin SK.

JAMES HUNTER MACHINE CO.
FOUNDED 1847 North Adams, Mass.

PREPARATION AND WET FINISHING EQUIPMENT

You'll Seldom See
Your Maintenance Man
Hovering Over A
UNI-PULL DRIVE





A passing glance is usually all the attention a Uni-Pull drive needs from a maintenance man.

HERE'S WHY...The motor base automatically maintains belt tension...assures uniform pull around the pulleys...eliminates slide-rail tension-guesswork.

The flat leather belt pulls as a unit. No separate and uneven tensions. No danger of the misalignment wear you can get with multiple, groove-trapped belts.

If you're interested in years of service with minutes of maintenance, ask your leather belting supplier about Uni-Pull.

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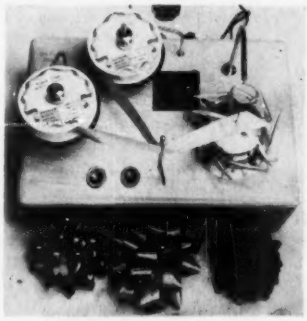
330 West 42nd Street, New York 18, N. Y.

ples, inserted through any of eight openings in the rotatable cover, may be turned to the front of the bath for observation. An accessory cooling coil may be obtained that permits bath temperatures below that of the room.

Machine Ties 150 Ribbon Bows per Hour



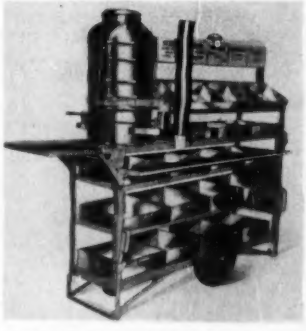
AN AUTOMATIC MACHINE that can tie ribbon bows for gift packages at the rate of 150 per hr. has been developed by Tymatics, Inc., P. O. Box 145, Dallas, 2, Texas, in cooperation with Burlington Mills. The new machine replaces expensive hand labor and ties uniform bows.

The Tymatic Bow Spinner can tie a wide variety of bows, constructed from all types of ribbon, at an estimated labor and cost saving of from 5 to 7¢ a bow.

The machine will be leased, rather than sold.

It is estimated that an employee can be trained to operate the machine in about 15 min. Important feature is the precision of its operation, which makes it possible to control the amount of ribbon used to the inch. The machine can use various combinations of ribbons.

Mobile Canteen Can Serve 150 in 30 Min.



THIS LUNCH DISPENSER is designed to reduce the valuable time lost while employees wait in line for refreshments. Maker is Vacuum Can Co., 19 So. Hoyne Ave., Chicago 12, Ill.

44% MARGIN OF SAFETY

...with the Kidde Dry Chemical Extinguisher

Kidde Dry Chemical Extinguishers shield the operator from the flames with a heat-absorbent curtain of fine powder. The Kidde 20 pounder covers 36 square feet—44% MORE AREA than required by Factory Mutual Laboratories. The Kidde 30 pounder covers 48 square feet--as compared to *the 35 square feet required by Factory* Mutuals.

These Kidde extinguishers drive the dry chemical with enough force to overcome updrafts caused by the heat of the fire. The special Diffuser Horn applies the powder in a cloud-like pattern—helping to eliminate the splash of flammable liquids and offering the *greatest protection to the operator.*

For fires in textiles, flammable liquids and live electrical equipment Kidde Dry Chemical Extinguishers are highly effective. Write for information on portable or wheeled units.

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V-Belt Deliveries

(Continued from page 130)

times that of standard belts with the same size cross section. While it is good engineering practice to design a drive for standard belts with the thought that the super-rated belts can be used to increase the capacity of the drive should it become necessary, these super-rated belts can also be employed to reduce the number of grooves required in a drive and so bring it within the stock-size range. For instance, delivery time for a 15-groove "D" section drive is apt to be several months, whereas through use of super-rated belts the number of grooves could be cut to 12 and the sheaves obtained from stock.

The demand for variable-speed drives has been increasing rapidly and shipments of these special drives cannot always be made in the time required. The obvious answer, in order to get equipment into operation, is to use a constant-speed drive made up of stock sheaves and belts until delivery is made of the variable-speed drive. Care should be taken in selection of the constant-speed drive so that the same set of belts can also be used on the variable-speed drive. While use of such a substitute drive involves additional expense, the cost is often small compared to the loss in production which would otherwise be experienced while waiting for the variable-speed equipment.

TOE-Slashing

(Continued from page 117)

weighing and storage more than outweigh any advantages claimed for the bulk systems. Most of the mills don't use enough to buy by the carload often enough to offset caking and lumping of the starch in storage.

Multimotor Drives

Nine mills reported on this subject, and all nine said that slasher efficiency is higher since multimotor d.c. drives were installed. Actual figures show a 5 to 10% increase in efficiency and production.

More yarn is wound onto the beams since the drives were installed—from 6 to 20%—depending on the mill reporting. Beams are much more uniform as well, partly because the gradual increase in speed eliminates the jerk and backlash that used to cause stretched yarn. In regard to stopping, one superintendent said, "Now it is almost impossible for a slasher tender to tangle beams at the back and tear out by stopping too quickly."

With the positive-stretch control

* first Kalman floor laid in 1916 still in use!

No question about a Kalman concrete floor's ability to "take it". Testimony tells again and again of Kalman ruggedness.

For the key to maximum durability in your flooring, ask about Kalman "absorption control" — write for bulletin.

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It's the "Conical Ride" that does it!

The motorcycle demon rides in safety due to the conical shape of the ring! It's that CONICAL principle that gives you BETTER YARN at lower cost from

HERR "Conical"

"FREE HEELING"

RINGS

Note that shape! Only Herr has it. Note in cross section how the traveler (shown at HIGH SPEED) hugs the ride, and rides on top of the ring. The heel is free to compensate with GIVE AND TAKE for yarn variations.

Remember, ONLY the Herr Conical Ring is so designed, to give you smoother yarn, less breakage, uniform bobbin density, less waste — in short, greater production at LEAST cost.

Only **HERR** *gives you the* **CONICAL RING**

Send for a Herr representative today. Ask him also about the controlled lubrication features of HERR Conical Rings that save oil, keep yarn cleaner, make travelers last longer and eliminate rewicking. Glad to call on you any time!

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123 Treaty Rd., Drexel Hill, Pa. Phone Hilltop 6-1583
H. R. Fisher, Concord, N. C. Box 83—Phone 8566
H. J. Smith, Providence Box 1187—Garden 1-0120

that accompanies multimotor drives, the mills say that warps are consistently better than ever before. The improved starting and stopping are also responsible for the uniform warps.

Both increased slasher efficiency and increased weaving efficiency are given as justification for the money spent on the new drives. Some mills found that weaving efficiency, with the better warp beams, was the prime reason. But other mills could justify the cost on slashing results alone.

Other reasons why these mills like the multimotor drives are lower tying costs, less slasher waste, and lower slasher maintenance.

Size Formulas

Mill M wanted to know what size formula should be used for the warp of a 62x60 tubing of 14s yarn. Here are some answers.

1. Use 200 lb. of pearl starch, 16 lb. of compound. Homogenize at 1,400 psi. and finish at 205 gal.

2. Try 140 lb. of thin-boiling starch, 15 lb. of combination softener and finder, 92.5 gal. of water. Finish at 135 gal.

3. Put in 1 lb. of pearl starch per finished gal. Use 7½% emulsified tallow (50% fat) on the weight of the starch. Add antifoam if needed. Heat to 205° F. Homogenize at 2,000 psi.

Immersion Rolls

The mill men were evenly divided on the question of cage-type immersion rolls.

The four mills that like the rolls said that agitation in the size box is improved and there are fewer lay-ins. Penetration and pickup are better.

The four mills that didn't like cage-type rolls said that the size gets beaten up too much and that air gets into the size. Trouble with yarn lapping and lumps was also experienced.

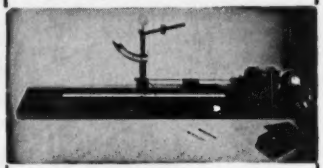
Wide Beams from Narrow Ones

The problem discussed in this section was that of slashing wide beams from narrow section beams. Some mills had experienced trouble with the selvage yarns stretching.

One remedy suggested was putting the lease-rod section back from the front cylinder in order to reduce the angle at which the yarn approaches the wide loom beam.

Several mills that do slash from narrower section beams reported no difficulty with selvage, however. Among these were mills slashing 100-in. loom beams from 54-in. section beams and 88-in. beams from 54-in. and 96-in. beams from 66-in. widths.

PRECISION TWIST TESTERS



For Determining Turns per Inch in Continuous Filament or Spun Singles and Ply Yarns

For Determining Take-Up Due to Twist in Filament and all Types of Plied Yarns

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ACCURACY - SPEED
EASE OF OPERATION

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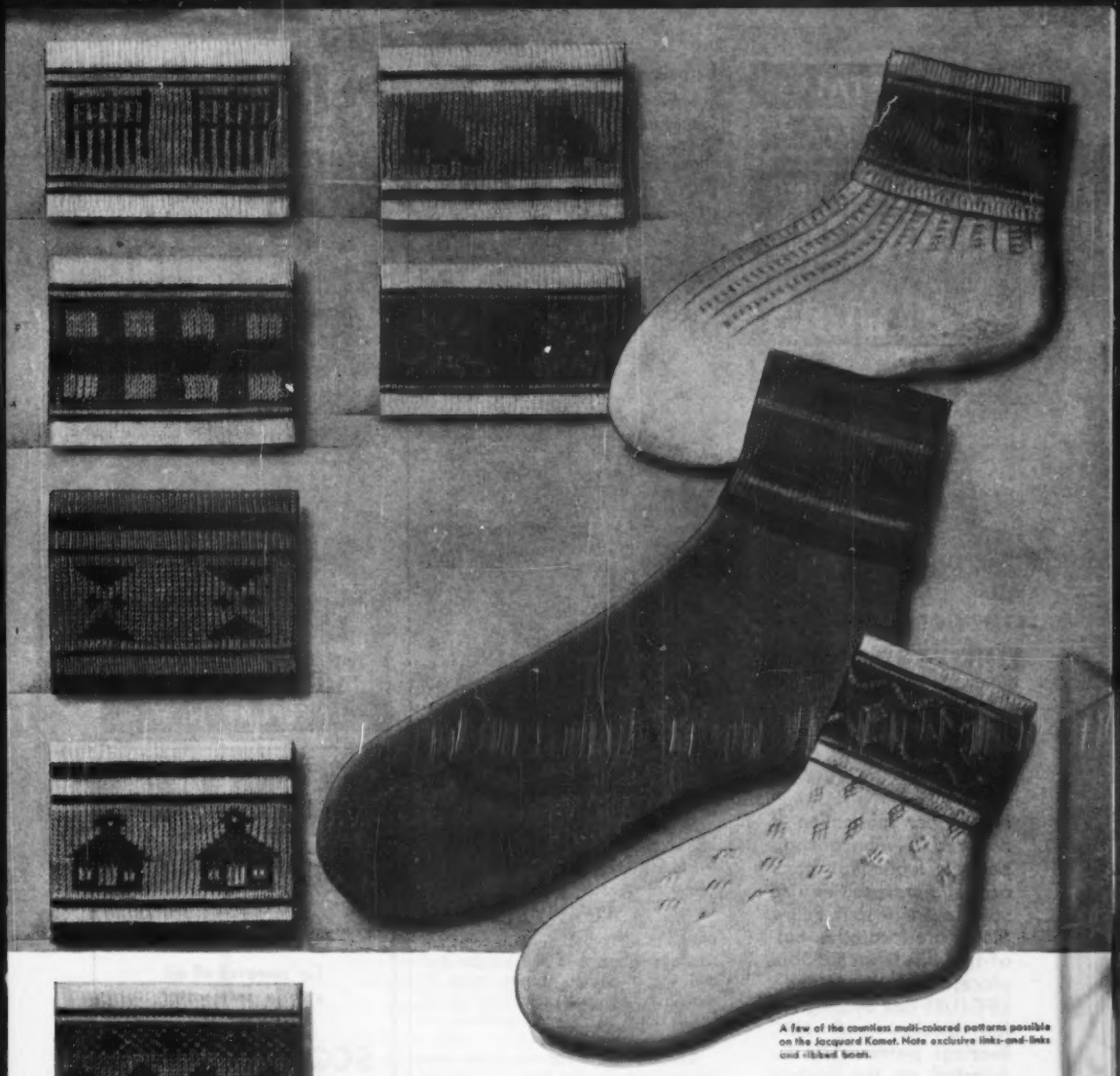

A few of the countless multi-colored patterns possible on the Jacquard Komet. Note exclusive links-and-links and ribbed boots.

NEW S&W
Modern Jacquard Komet Links + Links
for Multi-Colored Cuff Patterns in One Automatic Operation

This new machine, latest S&W development, produces countless multi-colored jacquard variations in ribbed cuffs of anklets for infants, children and women—in one high-speed, completely automatic operation. It eliminates slow and costly hand transferring of separately knitted ribs. Production per knitter is therefore higher; knitting costs are reduced.

For the first time, through the medium of double-patterning and the new jacquard mechanism, it is possible to produce colorful jacquard cuffs, *with boots knitted in an extensive variety of links-and-links designs*—or the usual plain ribbed or flat stitch fabrics.

Call your S&W representative for details and pattern samples.

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Ask your Wood's Industrial Distributor or write us for Bulletin 194.

T. B. WOOD'S SONS COMPANY
Main Office & Factory: Chambersburg, Pa.

Lubrication Manual

(*Continued from page 115*)

lubricating such equipment completely understand their operation. They should be familiar with the parts that require lubrication and protection.

Maintenance personnel must also appreciate the bad effects that result from careless or inadequate cleaning methods and application of lubricants. Safety measures should also be stringently observed. When using petroleum hydrocarbon solvents such as mineral spirits, plant-safety precautions should be respected. These solvents should not be employed in the presence of possible sources of ignition, such as open-armature electric motors, unprotected light bulbs, open flames, etc. Proper handling will guarantee against fire hazard. Mill supervisory personnel should conduct educational programs to insure that each individual assigned to this work is thoroughly familiar with the proper methods.

A well-planned preventive-maintenance program, plus the use of lubricants especially compounded to eliminate the difficulties mentioned above, will guarantee longest equipment life and maximum high-quality production.

Hosiery Man-Hours

(*Continued from page 132*)

offset by the greater tendency of nylon to snag.

Substantial improvement in handling methods has decreased the number of "throw-outs." New plastic materials used in the construction of tables, carriers, and examining forms have resulted in fewer snags. Other recent technological developments are the establishment of the loopless toe and the invention of new types of mending and dryer machines, all of which tend to reduce man-hour requirements.

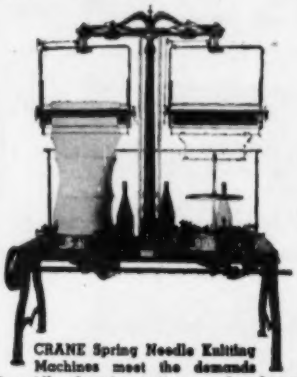
The skill of the operator; the service rendered by the fixer, who maintains the equipment in good running order; and the quality of the final product also affect unit man-hours.

Seamless Hosiery

In 1950, man-hours expended per unit of production dropped more than 4% under the previous year and were at the lowest point since 1946. Unit man-hours declined substantially during the war, and by 1946 were 14% below 1939. From 1946 to 1948, however, unit man-hour requirements rose 13% as production declined 14%. From 1948 to 1950, unit man-hours dropped 10% to a level 12% below 1939.

Improved machinery in the seam-

1870 CRANE 1951
SPRING NEEDLE
KNITTING MACHINES
Speed - Quality - Low Cost



CRANE Spring Needle Knitting Machines meet the demands of rapidly changing patterns and styles on all models of whole

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Substantially reduces labor costs and cuts drying time in more than half.

The "Scienen-Obermaier" Combination High-Speed Extractor-Drier has been perfected after many years of practical research application and has been enthusiastically received by the entire trade. This new system of extracting and drying has cut the total drying time more than half over other systems and has proven a superior method to any other available for package drying. This Combination High-Speed Extractor-Drier can be utilized by even the smallest package dyer to great advantage.

The quick drying time means faster turnover of yarn in the dyehouse, eliminating bottlenecks, and cutting production time in half. This means half the required floor space and half the material carriers.

In actual operation, the material carrier is removed from the dyeing machine and placed in the extractor-drier. For average production, the entire operation is handled in this one machine requiring 1½ to 2 hours. For larger production, the same machine is used for extracting. Additional Port Driers are used to maintain the same high-speed drying results.

Submit your sample package to our laboratory and you shall receive exact data on your type of yarn.

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SOLUBLE SILICATES for INDUSTRY

less-hosiery field has contributed to reduction in the number of man-hours required to manufacture a dozen pairs of socks. However, machinery is but one of a number of factors affecting man-hours requirements per unit of production in hosiery manufacturing. The degree of capacity utilization, changes in style, and changes in consumer preference have all contributed to the year-to-year fluctuations in unit man-hours.

During the war, half-socks required by the armed services were largely made on transfer-top machines. With the return to civilian operations, production shifted mainly to automatic machines and away from transfer-top machines. One knitter can tend 20 to 30 automatic machines.

During recent years the half-hose machines in use have become more complicated because of the growing demand for highly specialized goods. As a result, unit man-hours rose from 1946 to 1948.

Overhead is relatively high in all seamless-hosiery manufacturing. Idle capacity is prevalent, often 50% of the machinery is not in use. The style factor, changes in consumer demand, and the seasonal nature of the demand contribute to the high level of unused capacity.

"Wonder Fibers"

(*Continued from page 137*)

The Challenge to Management

First, let me say that like all industry, we need one general frame of reference in which to work. For us in the textile-apparel industry it is simply this: to make a greater abundance of good fabrics for good clothing, of good taste and fashion, available to more people at prices they can afford.

Therein lies the challenge to management. How will we use the wealth that our fiber-producing industry is handing to us? What will we do with this wealth? Will we add to it and pass on greater benefits, or will we be content to dress up the wealth and pass it on, in really unchanged and unsatisfactory form? The challenge then is to take these wonder fibers and make them into truly wonder fabrics.

Now, what are some of the elements of management that are so important to accomplish this end? Let me list just a few of the more important:

1. To experiment and develop every possible use for every fiber so that it ends up as the best fabric possible for a suit, a coat, or a dress.
2. Initiate an industry-wide promotional effort, immediately, to get

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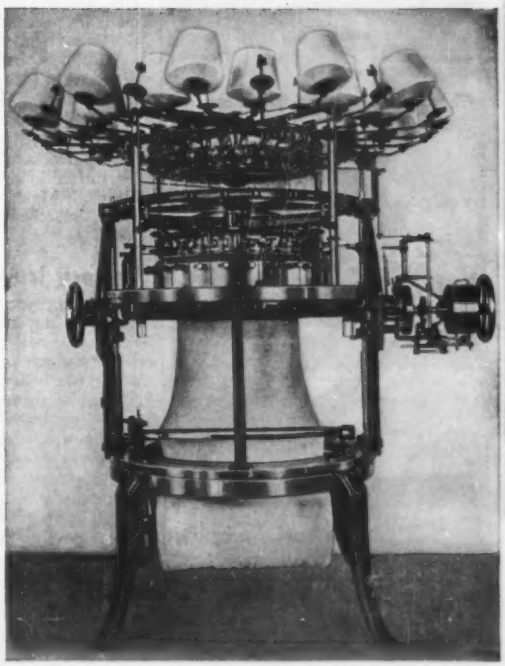

Here's a performance package hard to beat! . . . This machine is not only versatile in the handling of many types of fabrics. In addition, its special size frame is built to handle exceptionally wide fabrics. It's available in popular sizes 26" and 30" and is furnished in all cuts up to 24 needles per inch.

INQUIRE TODAY!

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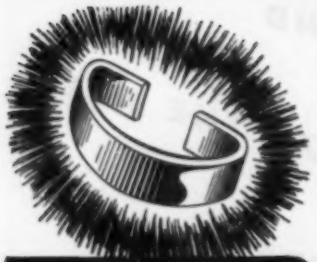

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Your Friendly DARY Representative

behind the wonder products of our established man-made fibers and to lay plans in the future to aggressively tell the story of the newer fibers and fabrics when they are in volume production. Certainly, in order to sell these new products, we must of necessity tell the buying public just what qualities and characteristics they possess. I think our industry has been negligent in not telling its story in a unified way.

3. To honestly merchandise our fabrics based on the job each can do for a particular apparel, home-furnishing, or industrial use rather than on the shortsighted novelty or publicity value of any fiber.

Best Fiber or Blend for Each Use Must Be Found

On the first point, our forward-thinking yarn producers are now passing on to us a tremendous opportunity. The fiber of one company has limitless possibilities for fabrics that require warmth. Another is ideal for lightweight clothing that can be laundered. Still another is outstanding in its abrasive characteristics. But having one or more of these fibers at our disposal does not, by any means, put an end to our task. We must take each fiber and try it in all fields. Will it do the best job for us in men's suitings, women's lingerie, or work clothing. Or will it be still another fiber that is best for these fields?

Perhaps it will take the blending of several of these new fibers with our existing man-made fibers or with our natural fibers to produce the best possible fabric for each individual end use. I feel we have only scratched the surface in this important field of blends. Much progress has been made, but there is still a lot to be done!

Rightness Is All-Important

I am sure you will forgive me if I call upon our company's experience. For many years we had been guided in our research and development work by this one basic principle. That principle is: be right rather than first. It is nice to be both, but with these many new developments in our fields, that is not always possible. Therefore, let us accept rightness as the all-important point. To this end, we maintain what we would like to feel is the most up-to-date of the experimental programs in the weaving industry including separate spinning, sample-weaving, and dyeing and finishing laboratories. Whether it be one of our established man-made fibers or one of the newer fibers, we make several thousand samples a year to be analyzed, tested, and perfected. Our unique wear-testing program of some 450 individuals around the country gives us first-hand reaction on garments made of any new fabrics. Often, I am certain, we spend thousands of dollars that show no tangible results. Nevertheless, this work is necessary to develop the best possible fabric.

Get Closer to Consumers

So much for research and experimentation. But there is still another avenue open to us. And we should definitely use it to find out just what is the best fabric for any particular end use. This avenue is actually a two-lane highway. We must get information to guide us from fashion experts, designers, manufacturers, and retailers. Perhaps even more important, before we plow ahead, we must get the facts by "asking the man or woman who owns one."

Along these lines, I would like to tell the story of a young Congressman from Missouri. As he was about to leave for Washington just after he was elected, he asked an older statesman from his home grounds for some advice. What should he do about the letters he was sure he'd get from his constituents? "Son," the wise old jurist said, "you'll get a lot of letters. Better read them all. And especially the ones 'writ' with pencil on tablet paper."

To fulfill the promise of wonderful fabrics from the truly wonder fibers, from rayon and acetate on down, we are going to have to "read the ones 'writ' with pencil on tablet paper."

Industry-Wide Promotion Body Needed

Now, after we have read the handwriting on the wall, there is another very vital step management must take to bring all of these efforts to fruition. And that one thing is to inform the trade and the public about what we have. I think this should be one of our more important objectives.

For many years, it has seemed to me that the rayon, acetate, and man-made fabrics industry has grown up to a greater maturity than many people recognize. Despite this maturity, we still act in many ways like a house divided. What we need in simple language is one industry-wide promotion body; a council, perhaps, to tell our story. This body should embrace all members of the man-made textile community. It should include yarn producers, weavers, converters, and dyers and finishers. What should it do?

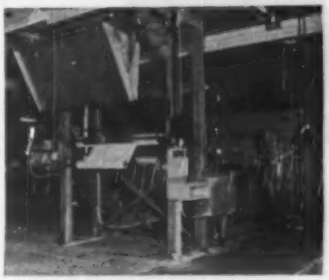
1. It should serve as a clearing house

Proctor PIN TENTERS

OFFER DEMONSTRATED RESULTS COMBINING *ALL THREE FEATURES* NEEDED FOR QUALITY FINISHING

CONTROLLABLE OVERFEED

The overfeed mechanism used with Proctor pin tenters, first developed by John Dalglish & Sons, of Scotland, and now manufactured and sold by Proctor & Schwartz, Inc., in America, with improvements designed for American finishing, makes it possible to overfeed fabric to pins in any percentage from minus 5% to plus 35% and have the cloth evenly and uniformly deposited. The amount of overfeed can be instantly adjusted by a simple handwheel arrangement.



ACCURATE GUIDING

Proctor pin tenters are sold with an improved Electro-Hydraulic positive displacement guider of Proctor design and manufacture, under basic Dalglish patents, providing extreme accuracy in guiding fabrics onto the pins at speeds of over 100 yards per minute.

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The special nozzle system employed in the housings of these overfed pin tenters assures maximum drying speed without fabric distortion. Heated air at high velocity is impinged against both sides of the fabric and is equally balanced. Even, uniform drying is the result. Proctor Overfed Pin Tenters are producing quality fabric results at the rate of more than 75 million yards annually.

PROCTOR OVERFED PIN TENTERS are available in either the vertical (Dalglish) or horizontal type, for laces, tricots, specialty goods, as well as standard fabrics. A demonstration can be arranged for the fabrics you are finishing!

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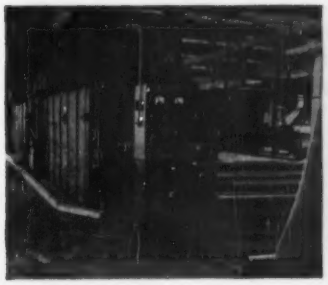

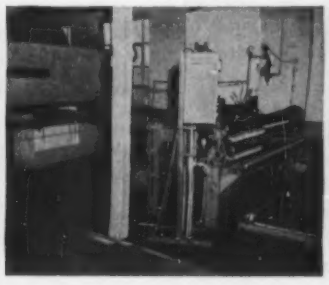

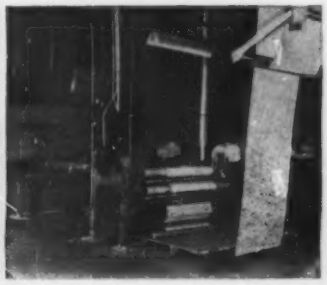

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Made Especially for TEXTILE MILLS

Textile superintendents furnished the ideas for a good broom especially adapted to the textile industry. The result is a superior sweeping tool — the Fuller Textile Broom. Light weight... flexible yet resilient enough to remove the finest lint. Extra wide flare... sweeping edge that does not heel over. Light weight metal casing protects broom's shoulders when sweeping under machinery. For further information, write...

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of information for fiber and textile mills, manufacturers, retailers, and consumers. It should not only disseminate information on the progress we shall make from now on, but fill the vacuum of information on all we have already done. In 25 years our industry has achieved as much as other groups have achieved in centuries. It is a proud accomplishment.

2. It should act as a national, industry-wide spokesman wherever it seems necessary. Being a resident of Washington, I recall several instances when our industry has come off second best to our agricultural friends primarily because we did not speak out as a group. For an industry the size of ours, it is inconceivable to me that we should not have one unified strong voice.

3. It should be an aggressive promotional body for all our products whether it be in working with manufacturers, retailers, fashion magazines, newspapers, or consumer groups. Such promotions or publicity must take a positive approach to consumers on the qualities of our products rather than to tear down or attempt to stop the use of competitive fibers. Let's not be guilty of following the negative approach as practiced by some of our friends in other branches of the textile industry.

There are many such groups that should spur us on and, perhaps, give us a framework to improve upon. The National Cotton Council, for one, has done an outstanding job for that industry.

Industry Must Use Wealth for Good of Man

In summary, our industry has made giant strides through technical advances and management vision. We have new fibers with fantastic vistas of opportunity. We have so-called "old" fibers that have proved their worth and can still be improved to do finer jobs in present or new end uses. The challenge to management is to use them wisely, to find out what they are best adapted for, to research and experiment, to improve quality and performance, to find out what the public wants and to get to them goods that are better adapted to fill those needs than the world has ever seen.

We must use our wealth to add to the utmost of our capacity to the good of all men.

The other day I came across a quote from Bruce Barton which I think is apropos of my remarks. It was as follows:

"There are two seas in Israel. One is fresh and fish are in it. Green verdure lines its banks; children play along its shores. This sea gets its sparkling water from the river Jordan. Men build their houses near it, and every kind of life is happier because it is there. The river Jordan flows on south into another sea. Here, there is no splash of fish, no fluttering leaf, no song of birds, no children's laughter.

"This is the difference. The Sea of Galilee receives but does not keep the Jordan. For every drop that flows into it, another drop flows out. The giving and receiving go on in equal measure. The other sea is shrewder, hoarding its income jealously. Every drop it gets, it keeps. The Sea of Galilee gives and lives. This other sea gives nothing. It is named the Dead."

Which shall it be? We certainly have every opportunity to take the wealth we have, add to it, and pass it on like the Sea of Galilee. We are on the threshold of a great forward-moving era and I am confident that our industry will meet that challenge.

ASME Meeting

(*Continued from page 113*)

two additional operations with a 0.2 of 1% waste factor.

If the filaments are fed to the cutter roll nip perpendicular to the axis of the rolls, a straight cut is made, such as all fibers 3 in. A variable-cut staple is acquired by oscillating, in the horizontal, the sheet of filaments just prior to its entering the cutter roll nip. One direction of oscillation feeds the filament at an angle approaching that of the threads and thereby produces a long-staple cut. The other direction approaches an angle crosswise to the thread and produces a short cut. The maximum length that can be cut with any cutter roll is dependent on the gage of the rest of the machine; the minimum is ¼ in.; or the pitch of the helix threads.

The uniformity of the tow being fed and the number of tows fed with respect to doublings have no direct bearing, as normally accepted in the textile trade, on the uniformity of the sliver delivered by the converter. The uniformity of the tow and size or number of tows fed contributes or distracts from our ability to form a uniformly thick sheet to be fed to the cutters. The uniformity of delivered sliver is entirely a factor of the uniformity of the depth of sheet fed and the number of instantaneous cuts. The 26 instantaneous cut points are actually our doublings; and if we could double this to 52 on the same width and depth of sheet, we would be able to deliver a considerably more uni-

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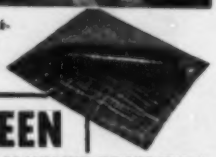
For wrapping, packaging all textiles, for shipment or storage.



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ASSURES COMPLETE PROTECTION

YOU save time, labor and money when you adopt FIBREEN packaging methods. This tough, waterproof, reinforced wrapping is easy to handle . . . takes less time . . . protects textiles from dirt and moisture in transit and storage . . . makes a light, compact package . . . reduces shipping and storage costs.

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London, England — Sydney, Australia

form sliver. With respect to the size of tows, we can much more readily produce a uniform sheet with a large number of small tows than a few big tows. Aside from this, the smaller tows allow us to acquire a greater range of percent blend combinations.

The number of fibers in the cross section of the sheet as delivered by the cutter rolls at any given instant ranges from 400,000 fibers of 5 den. per fiber to 1,300,000 fibers of 1.5 den. per fiber. Each one of these fibers must be separated from those adjacent that are cut coterminous. The separation must take place both depthwise and crosswise; if not, "married fibers" will pass through into yarn and cloth as no subsequent known drafting nip or retaining phase is selective enough to separate two or more such identically cut fibers. In addition to this problem, we have the added chore of first debonding the leading and trailing tip of the cut fibers prior to separation. At this time, viscose and acetate are the only two materials that present any problem in this degree. And as I mentioned previously, with the proper humidity and finish on these materials, the problem is eliminated. However, we must still be prepared for it.

Blending on the converter

Tow blending consists of laminating two or more sheets of each type of tow being fed to the cutter. The resulting sheet delivered by the converter is still laminated, and when rolled up on the diagonal, a jelly roll sliver is formed.

The blending of natural fibers with tow is accomplished with the use of the blending attachment mounted above the cutter rolls. All natural fiber by-passes the cutting action and is handled through the blending attachment, which imparts a draft to the material for establishing the proper blend control. The sheet thus formed of natural fibers is then introduced into the converter between the two shuffle phases. It is likewise laminated onto the cut-filament sheet at this point. The same jelly-roll collection is made of this sheet. Thus the desired blend is brought about in three drawing operations.

To elaborate on this blending phase, one can charge the converter with black filament on the left half and white filament on the right half. The resulting sliver will have a pure white core completely surrounded by a ring of black fiber. Likewise, if the black is fed as a sheet across the width of the cutting nip and laminated with a white sheet on top, the resulting sliver will have a black casing and the cross section will be similar to a jelly roll.

Blend example: The following blend represents an example that utilizes all the features available.

Blend wanted: 20% nylon, 3.0 denier/filament, 90,000 total denier tow; 20% wool, 62s, 1 ounce per 5 yd. comb sliver; 60% vicara, 7.0 denier/filament, 675M total denier tow.

The nylon and Vicara are in tow form, and we are requested to produce a variable cut from 3 to 4 in. The wool is 62s comb sliver and has a maximum staple length of 6¼ in. that we are to shorten for suitable blending with the 3- to 4-in. variable synthetic cut.

We feed to the cutter:

A. A bottom sheet of Vicara made up of two ends of 670,000-den. tow, 7.0-den. per filament, equaling 1,350,000 total den.

B. A top sheet of nylon made up of five ends of 90,000-den. tow, 3.0 den. per filament, equaling 450,000 total denier.

Total charge to cutter equals 1,800,000

$$\frac{60\%}{20\%} \text{ equals } \frac{1{,}350{,}000 \text{ den. Vicara}}{450{,}000 \text{ den. nylon}}$$

At the point in the converter where the natural fibers are laminated onto the synthetics, the synthetic cut-filament sheet will have had a 5.32 draft. Therefore, the 20% of wool must be calculated on

$$\frac{1{,}800{,}000 \text{ den. Vicara and nylon equals } 338{,}000 \text{ den.}}{5.32 \text{ draft}}$$

By use of the formula:

$$\text{grains/yard equals } \frac{\text{total denier}}{.038 \text{ constant}}$$

The 338,000 den. equals 530 gr./yd. The wool content will be:

$$\frac{80\% \text{ synthetic}}{20\% \text{ wool}} \text{ equals } \frac{530 \text{ gr./yd.}}{X}$$

X equals 133 gr./yd. of wool

Therefore:

$$\frac{\text{"X" ends of comb silver 1 oz./5 yd. or 87.3 gr./yd.}}{\text{with a draft of 6.5 in wool blender}} =$$

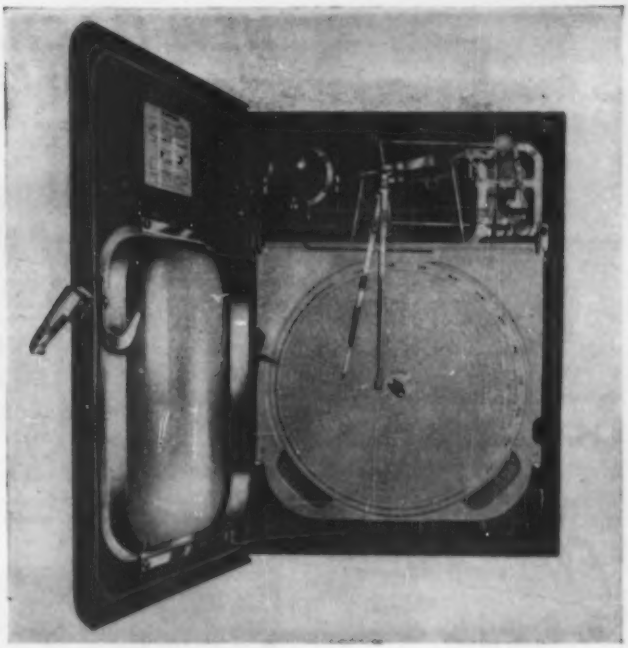
133 gr./yd. delivered by blender.

Required: 10 ends of comb sliver equals 134 gr./yd.

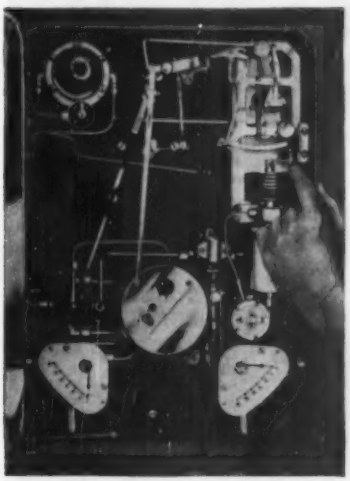
In order to match the wool staple more closely to the synthetic, we ratch the two sets of drafting rolls on the blender to 4½ in. The resulting effect is that all wool fiber over 4½ in. in the original comb sliver is broken so that the new maximum length is 4½ in.

The blending attachment is capable of handling up to 12 3-oz. tops. All material that passes over the blender is in addition to the cutting capacity of 2,000,000 den. and consequently adds directly to the production of the unit.

Anybody Can Take Care of a BRISTOL SERIES 500 CONTROLLER



Plant operating men quickly become familiar with it... and like to use it



Only One Simple Adjustment

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I.H.E. PRE-DRYERS

UTILIZE EXHAUST HEAT

To Provide a More Profitable Drying Operation

Function of this Pre-Dryer is to raise fabrics up to drying temperature before entering tenter house, which is accomplished by using treated air from the direct-fired tenter. This increases tenter house capacity by 15% to 20%, and gets maximum use of exhaust heat.

Air from the tenter's exhaust is distributed evenly over both sides of the cloth, which is festooned over 5 to 9 stainless steel rolls driven by friction clutches.

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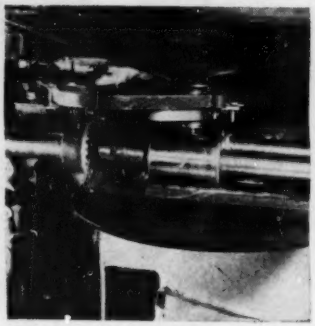
SPECIALIZED DRYING, CURING AND SINGEING EQUIPMENT FOR THE TEXTILE INDUSTRY

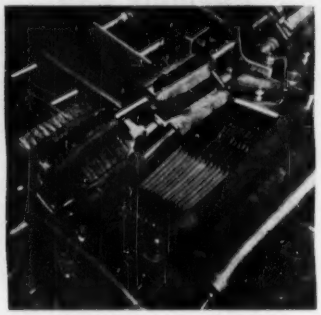
INDUSTRIAL HEAT ENGINEERING CO.
121 CLEVELAND ST
GREENVILLE, SOUTH CAROLINA

NEW MACHINERY
Also Plays Its Part at Livingston

(See main story starting on page 125)

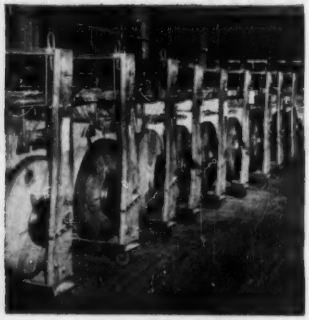


COILER DEVICE on new Stellite French comb makes the machine even more suitable for shorter wools and synthetics.

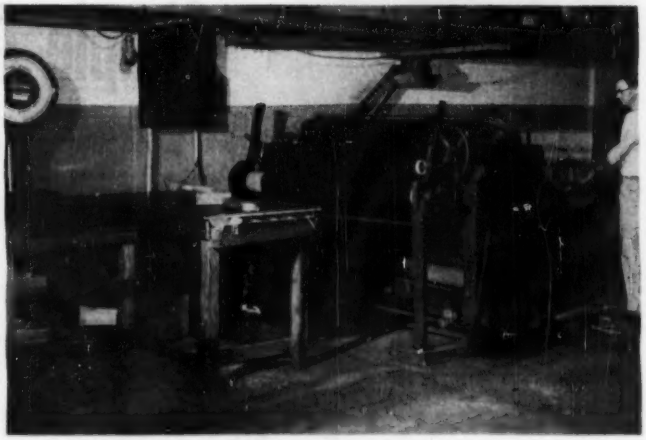


OPEN FALLERS REPLACE PORCUPINES in this Sant' Andrea machine. Better control, shorter "uncontrolled distance" result.

75% LABOR SAVING was made when this Uxbridge high-speed automatic tacker was installed.



SPECIAL RACKS for holding warps ready for the loom are lined up in neat rows near the weaving area.



FINAL INSPECTION is combined with measuring—sixteen cuts at a time instead of one. Minimum handling is required for weighing, as you can see.

Talk about control!

CORRUGATED AND SOLID FIBRE BOXES
FOLDING CARTONS
KRAFT BAGS AND SACKS
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From the moment the seedling is planted by Gaylord foresters until the shipping container is delivered, every step in growing and manufacturing is supervised by Gaylord specialists. It's this kind of experienced control that enables Gaylord to build boxes of unsurpassed quality for many of the country's largest users.

Gaylord Boxes

262

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Wherever you use fasteners

√ . . . . . under vibration
√ . . . . . under strain
√ . . . . . in limited space
√ . . . . . for fine adjustment
√ . . . . . in inaccessible places
√ needing strength in small sizes
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√ . . . for maximum holding power
√ . . . . . for fastening thin pieces

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socket screws and keys

Class 3 fit, quality controlled uniformity and strength, wide range of standard sizes.

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Allen-Type screws aren't necessarily Allen-Made
Get genuine Pressur-Formed Allen ⬡ Head screws in this black and silver box.

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News OF THE MONTH

New Rayon Finish. By means of ether linkage from a secondary alcohol group on one of the viscose-rayon cellulose molecules to a hydro-carbon that in turn is linked ether-wise to another cellulose molecule, Dan River Mills, Inc., Danville, Va., has developed a chemical process that gives rayon fabrics dimensional stability, crush resistance, and non-affinity for free chlorine and acid bleaches. For the present called X-2, the new process is applied after piece dyeing. It has been under direct development for four years and will supersede Dan River's resin-finishing process. The process promises to at least double the flex life of rayon fabrics also, according to Russell B. Newton, president, and L. K. Fitzgerald, research and development manager.

All-white rayon garments are now more practical than before, and rayon garments will now be washable in both home and commercial laundries, it is claimed. Dan River plans to finish all its rayon fabrics by the X-2 method as soon as conversion can be completed at Danville. No critical-list chemicals are involved, nor are any changes from standard equipment necessary. The process will be made available to all rayon finishers as soon as possible.

Grex or Tex? After several decades of work, an international agreement on a universally applicable method for numbering yarns has been arrived at, Dr. A. G. Scroggie of the Du Pont company reported recently to the American Society for Testing Materials in regard to the International Standards Organization meeting in Bournemouth, England, last summer. But American yarn consumers must make the next move in the campaign to place the Grex and Tex systems into practice, he said. No yarn supplier is going to tell a customer he is old fashioned by not using the new systems, the speaker observed. A Grex unit is based on the weight in grams of 10 kilometers of yarn. A Tex unit

Textile Calendar

AATCC, South Central Sect., Hotel Patten, Chattanooga, Tenn., Dec. 1, 1951.
AATT, meeting, Builders Club, New York, Dec. 5, 1951.
AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., Dec. 7, 1951.
AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Dec. 7, 1951.
School of Textiles, annual alumni technical conclave, N. C. State College, Raleigh, N. C., Dec. 7 and 8, 1951.
AATCC, Southeastern Sect., La Grange, Ga., Dec. 8, 1951.
LTI, open house, Lowell Textile Institute, Lowell, Mass., Dec. 14 and 15, 1951.

1952

AATCC, New York Sect., Hotel New Yorker, New York, Jan. 11, 1952.
Plant Maintenance Show, Convention Hall, Philadelphia, Pa., Jan. 14 and 17, 1952.
AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Jan. 18, 1952.
National Cotton Council, annual meeting, Roosevelt Hotel, New Orleans, La., Jan. 24 and 25, 1952.
AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., Feb. 1, 1952.
Cotton Research Clinic, National Cotton Council, Pinehurst, N. C., Feb. 13 to 15, 1952.
AATCC, New York Sect., Hotel McAlpin, New York, Feb. 29, 1952.
AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., March 21, 1952.
Fiber Society, spring meeting, Clemson House, Clemson, S. C., April 16 and 17, 1952.
Cotton Mfrs. Assn. of Georgia, convention, Boca Raton Hotel and Club, Boca Raton, Fla., April 16 to 18, 1952.
Knitting & Allied Crafts Exposition, sponsored by Natl. Knitted Outerwear Assn. and Underwear Institute, Grand Central Palace, New York, April 21 to 25, 1952.
Natl. Knitted Outerwear Assn., annual convention, Waldorf-Astoria Hotel, New York, April 22 and 23, 1952.
Natl. Assn. of Hosiery Mfrs., annual convention and conference, Claridge Hotel, Atlantic City, N. J., April 28 and 29, 1952.
British Industries Fair, Earl's Court and Olympia, London; and Castle Bromwich, Birmingham, England; May 5 to 16, 1952.
4th International Lighting Exposition and Conference, Cleveland Auditorium, Cleveland, Ohio, May 6 to 9, 1952.
ACMI, annual convention, Haddon Hall, Atlantic City, N. J., May 15 to 17, 1952.
Carolina Yarn Assn., annual outing, Carolina Hotel, Pinehurst, N. C., May 15 to 17, 1952.
American Society for Quality Control, annual convention, Onondaga County War Memorial, Syracuse, N. Y., May 22 to 24, 1952.
Textile Institute, annual conference, Assembly Hall, Edinburgh, Scotland, June 2 to 7, 1952.
STA, annual convention, Ocean Forest Hotel, Myrtle Beach, S. C., June 12 to 14, 1952.
ASTM, annual meeting, Hotel Statler, New York, June 23 to 27, 1952.
17th Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 6 to 11, 1952.
AATCC, national convention and dyeing and finishing exposition, Hotel Statler, Boston, Mass., Nov. 6 to 8, 1952.

1953

Knitting Arts Exhibition, Atlantic City Auditorium, Atlantic City, N. J., April 27 to May 1, 1953.
AATCC, national convention, Stevens Hotel, Chicago, Ill., Sept. 17 to 19, 1953.

1954

American Textile Machinery Exhibition, sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J., April 26 to May 1, 1954.

Only BENJAMIN "Magna-Flo" brings you this

exclusive combination !

1 *the latest advancement for*

highest lighting efficiency

...T12 SLIMLINE LAMPS*

*These instant-start, single-pin lamps have a higher light output than other fluorescent lamps—as much higher as 10% or more lumens per watt! "Magna-Flo" units are specifically designed to get maximum efficiency out of these lamps. Shallow socket design of exclusive "Springlox" lampholder assures maximum light output through minimum blocking of light.

2 *the latest advancement for*

lowest maintenance costs

..."SPRINGLOX" LAMPHOLDERS

"SPRINGLOX"
cuts maintenance costs two ways.

- **speeds maintenance**
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You get the maximum lighting efficiency out of the T12 lamp *PLUS* all the maintenance advancements of "Springlox" lampholders . . . that's the *exclusive combination* of Benjamin "Magna-Flo"! Only with "Magna-Flo" can you get *BOTH* in one unit . . . and you get both at *no extra cost!*

Send for FREE "Magna-Flo" bulletin; contains complete data on this high efficiency unit with the *exclusive Benjamin Combination!*
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"Springlox" lampholders are standard equipment with all "Magna-Flo" units, which are available in open or closed-end reflector styles; for 2 or 3 lamps; 48", 72" or 96" long; in individual units or continuous lines.

3a751

Norris Shuttle Binders are the product of many years experience in making wood parts for looms. Made of specially selected hickory, faced with top grade cowhide, and individually hand finished to give superior service. Available in styles for every loom and every type of operation. Order a supply today.

NORRIS BROS.
GREENVILLE, S. C.

Manufacturers of Super-Stroke Sweep and Picker Sticks

NEWS *of the Month*

(Continued)

is based on the weight in grams of a one-kilometer length.

X-51 Fiber Status. Developmental quantities of the new American Cyanamid Co. acrylic staple, temporarily called X-51, have been shipped to half a dozen U.S. mills for textile-mill evaluation and for the obtaining of cost figures. Only 3- and 1½-den. staple has been sent out so far. Types of equipment X-51 is being tested on include cotton, woolen, worsted, weaving, and knitting (half hose and knitted piece goods). A decision as to commercial poundage to be made available to mills will be made early next year upon analysis of the mill-evaluation data now being gathered.

Circular Knitting-Machine Development. A circular-knitting machine with independent latch needles and sinkers has been patented by Frank R. Page, a Scott & Williams, Inc., Laconia, N. H., engineer. It has been assigned to the company. The new development is said to make easier maintenance and repair of the knitting elements, and may one day become standard on all S&W machines.

The sinkers are controlled by a cam at the cast-off point, which presses the sinkers in, and by an adjustable cam opposite, which boxes the sinkers in at that point to prevent overthrow. A movable secondary cast-off cam follows and is spaced from the cast-off point to push all the sinkers in an extra depth. Resiliency permits the inward pressing of the cam to accomplish this purpose.

Acrylic-Fiber Forecast. While the acrylic fibers, with the exception of dynel, are the highest-priced synthetic fibers today, it can be foreseen that acrylic fibers will eventually be priced close to rayon, but will not equal it, C. W. Bendigo of the new-product-development department of American Cyanamid Co., New York, said in a recent talk at Drexel Institute of Technology in Philadelphia. He estimated the following production jumps from 1951 to 1953: dynel staple, 4,000,000 to 30,000,000 lb.; Orlon staple, 1,000,000 to 30,000,000 lb.; Orlon filament, 6,000,000 to 8,000,000 lb.; Acrilan staple, 1,000,000 to 30,000,000 lb. By the end of 1953, acrylic-fiber production is seen as approximately 100,000,000 lb., roughly equal to the poundage of nylon produced today.

Continuous Peroxide Bleaching. The successful extension of the continuous peroxide-bleaching system from cotton piece goods to cotton knit goods has been effected by eliminating the following defects in an actual installation, Thomas E. Bell of the electro-chemicals department of the Du Pont company said in a recent Philadelphia-Section AATCC paper: (1) The bleaching system was reduced to a single J-box range, (2) heavy piece-goods washers were replaced by light ones to reduce stretch, and (3) the bleaching formula was revised so the fabric could be scoured and bleached in one bath. The latter procedure eliminates the caustic scour often responsible for weight losses and harshness of hand. The new-type unit processes about 2,500 lb. of 4-yd.-per-lb. fabric per hour. The nine items of basic equipment cost about $50,000. Smaller equipment can be built to handle as little as 500 lb. per hr., the minimum rate economical to run.

Military Will Still Use Wool. There are at least four properties of wool that contribute toward making it desirable for use from a military standpoint, Dr. Stephen J. Kennedy, director of the textile, clothing, and footwear branch of the Research and Development Div., Office of the Quartermaster General, said recently. They are (1) the resistance of wool to wicking of water, (2) the high resilience of wool when wet, (3) the absorptive qualities of wool, and (4) wool's resistance to free flaming. No other fiber developed to date combines all of these properties the same way wool does, said Dr. Kennedy. On the other hand, it does not necessarily follow that wool must or should be used on a 100% basis for hard-military-use purposes. Dr. Kennedy called attention to the fact that wool people had not yet studied the functional properties of wool to a sufficient extent to make possible a clear statement of the physical properties of wool that actually make it a desirable fiber.

"Tar Spots" Identified. Tiny resin sacs of vegetable origin are a newly discovered source of "tar spots" in cloth that annually cost hundreds of thousands of dollars to remove, according to the Institute of Textile Technology, Charlottesville, Va. While a large number of the spots that plague manufacturers and customers alike are caused by asphaltic materials, a discovery by Leo Hubbard, ITT research chemist, proves beyond doubt that many come from resin sacs normally present in leaves or burrs mixed with the cotton during harvest-

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PROVE TO YOURSELF
THESE IMPORTANT ADVANTAGES

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5. Longer life. Less down time for changing travelers.
6. Cleaner frames—cleaner rooms.

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2. STRONG
3. RESILIENT
4. SMOOTH
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6. EXTREMELY RESISTANT TO WEAR

Many thousands of these Nylon Travelers are in daily use—giving complete satisfaction.

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Running Mates for
Increased Production

Watson-Williams
Pick and Pick Shuttles
Automatic Shuttles
on W-3, C-4 and C-5 Convertible Looms

PICK and PICK

Watson-Williams Spindle Shuttle (shown at right) with Patterson Tension, holds a 9½" paper tube, and is becoming increasingly popular on W-3, C-4 and C-5 Convertible Looms for the weaving of pick and pick fabrics.

AUTOMATIC

Weavers on all three looms, when operating automatically, are equally enthusiastic about Watson-Williams Automatic Bobbin-Changing Shuttle which holds an 8¾" bobbin. It may be equipped with Watson-Williams 15L Cotton Eye, 15L Center Tension or W15L Rear Tension Eye.

Ask your Watson-Williams representative to tell you the full story of these two shuttles as they may well apply to your weaving production.

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Watson & Desmond, Box 1954, Charlotte, N. C.
Arthur J. Bahan, 810 South Carolina National Bank Bldg., Greenville, S. C.
John Wyatt, Jefferson Bldg., Greensboro, N. C.
NORTHERN REPRESENTATIVE:
Guy C. Burbank, 32 Beaconsfield Rd., Worcester 2, Mass.
WESTERN REPRESENTATIVE:
Francis B. Wells, 805 Linwood Avenue, La Porte, Indiana

NEWS of the Month

(Continued)

ing. The tiny egg-like capsules, about one-fiftieth of an inch in size, can be spun right into the yarn and woven or knit into cloth. When heated, they burst; and a black substance resembling tar flows out to cause a smudge. Ordinary bleaching does not remove the stain; for unlike asphalt-tar spots, the resinous substance does not dissolve in petroleum solvents. With identification now made, a new method for eliminating the problem is forecast.

New Italian Fiber. A new animal textile fiber, "Coiesco," is being developed in Italy from the fatty membrane and the subcutaneous tissue left over from the dressing of skins for tanning. Conversion of the glutinous "fiber" from the inner side of the hide is obtained by ordinary leather-tanning processes. When tanned, the inner hide is treated at the correct pH to allow the fiber to resist deterioration. It is then dried. A spongy mass is obtained in the form of an aseptic tissue that can be carded. Resultant fibers are 3 to 4 microns in diameter, well suited for felting or for use as filling in blended fabrics. The firm of Giovanni Nicarelli in Turino is doing the developmental work.

Carpet-Rayon-Use Figures. During the first eight months of 1951, 22.7% of the surface fibers used in carpet production was carpet rayon. This percentage represents 22,300,000 lb. of carpet-rayon fiber. This figure would be even higher if carpet-rayon yarn had been available in greater quantities during the early part of the year, the Carpet Institute reports. Even so, the use of carpet rayon has jumped to 22.7% from 6% in 1950 and from 1.6% in 1949. The trend of this growth is particularly significant when the January, 1951, carpet-rayon-consumption percentage figure of 13.2% is compared with the August, 1951, figure of 33.5 %.

Mobilization News Items

Machinery Manufacturers Protest. The basis for determining allotments of controlled materials to textile-machinery manufacturers for the first quarter of 1952 should be reviewed, and consideration should be given to an upward revision of allocations, the Textile Machinery Industry Advisory Committee has recommended to NPA officials. The committee had been advised that, as a result of proposed reductions in materials made necessary by growing scarcities, its production level would be reduced to about the 1947 level, or approximately 45% less than its 1951 rate of output. With about 40% of present production going into maintenance and repair items, the proposed cut in materials allocations would leave only 10 to 15% of U. S. textile-machinery production facilities available for building new equipment.

Pre-Certification Postponed. Companies that begin construction of new industrial facilities before January first will be permitted to apply for rapid tax amortization without having obtained prior approval of the projects, DPA has made known. The agency has postponed until that time its proposal to adopt a system of pre-certification as a requirement for issuance of necessity certificates for tax amortization on new plant construction started after the first of November. Applications now may be submitted within six months after construction has started.

OPS Trade Guide. Supplementary Regulation 17 to CPR-22 has been published by the Office of Price Administration, Washington 25, D. C., to help manufacturers in applying for adjustment of ceiling prices under the Capehart Amendment (Section 402.d.4) of the Defense Production Act of 1950. The guide covers only the main points of the regulation and does not take its place. Manufacturers subject to CPR-22 may elect either to use prices previously calculated under CPR-22 or to replace them by December 19 with ceilings figured under this new supplement.

Sulphur Use Curtailed. The Defense Production Administration has worked out a program to restrict certain uses of sulphur to balance supply and demand. Restrictions fall chiefly on the use of sulphur in the production of sulphuric acids and carbon bisulphide. The shortage is not seen as great; it is estimated at less than 10% of over-all demand. The new limitations should not seriously disrupt any major use of sulphur.

New OD-7 Formula. A revised dye formula for production of Army webbing in the OD7 shade is now required in future procurements, the New York Quartermaster Procurement Agency has made known. The new dye formula utilizes the same dyes as those required for field-uniform fabrics in the OG-107 shade.

A Cloth Finisher Asks . . .

"What is its overfeeding range?
How fast will it operate?
Will it handle all types of fabrics? all weights? all finishes?
Is it equally effective on all colors? — all shades?
Is it completely adjustable?
Will it attach to my tenter frame?
Can I transfer it easily from frame to frame?
Does it operate on a new principle?"

Here are the Facts —

The M&W Positive Overfeed with Selvage Guider regulates overfeeding positively and uniformly from —5% to +30% for all fabrics — any weight or finish — at speeds up to 100 yds. per minute. A simple turn of the wheel changes amount of overfeeding.

Pinning of each selvage on the tenter chain is adjustable, can be held within ¼" tolerance. A photo-electric cell engages selvage — *instantaneously* corrects sidewise variations, is adjustable to react with equal efficiency to all shades and weights of fabric.

This all-ways adjustable unit attaches to practically all existing tenter frames (when equipped with M&W pin type tenter chains), is easily transferred from one frame to another.

On an important new principle, guider arm brings cloth to meet the rails instead of rails to meet the cloth — gives you greatly increased speed and accuracy by moving ounces of aluminum instead of hundreds of pounds of cast iron.

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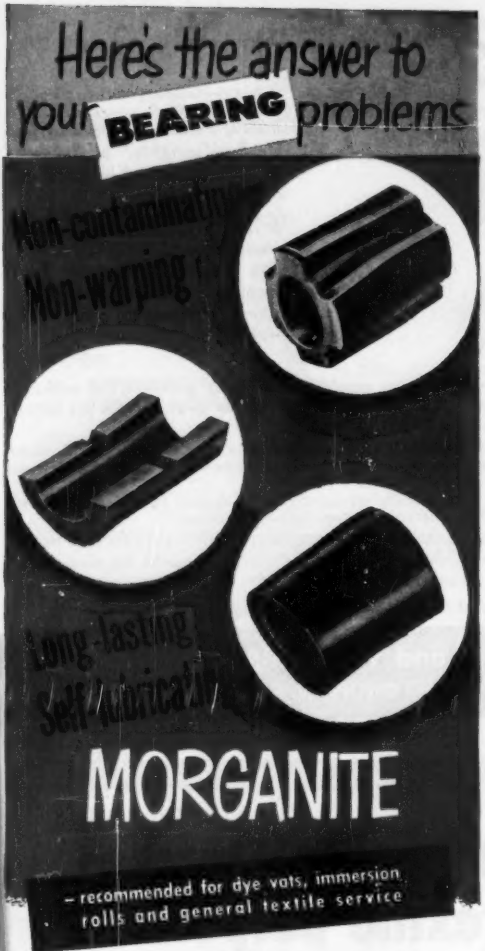

Operates efficiently in all dyes and bleaches without ill effect to bearing or the liquids. The self-lubricating quality of the bearing is inherent in the material — no oil impregnation is used and the bearing never needs lubrication. Morganite Bearing and other carbon parts are non-warping, impart no taste or odor, are unaffected by, and will not contaminate, chemical solutions. Being self-lapping and polishing, they offer long-lasting high speed, high pressure service.

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LONG ISLAND CITY 1, NEW YORK
Manufacturers of CARBON MOTOR and GENERATOR BRUSHES, CARBON PILES and SELF-LUBRICATING CARBON SPECIALTIES

NEWS ABOUT Suppliers

Equipment Suppliers

American Air Filter Co., Inc., Louisville, Ky., has appointed Harry J. Noles manager of the air-filter division, succeeding the late Howard W. Pound. Former assistant manager of the division, Mr. Noles joined the company in 1928.

Baker-Raulang Co., Cleveland, Ohio, has elected Edwin W. Sankey vice president and assistant to the president. John A. Matousek has been elected vice president in charge of manufacturing.

Carrier Corp., Syracuse, N. Y., has elected William Bynum executive vice president. Mr. Bynum was formerly vice president and general sales manager. He joined the Carrier organization in 1930.

Gates Rubber Co., Denver, Colo., recently observed its 40th anniversary as an industrial organization.

H & B American Machine Co., Pawtucket, R. I., has appointed Frederick A. Odell, Jr., supervisor of head-office sales. Mr. Odell joined the company in 1937 and has been in sales since the war. Harold S. Barney succeeds the late Ernest Haswell as New England salesstaff member.

Hayssen Mfg. Co., Sheboygan, Wis., has appointed Ralph C. Russell general sales manager. For the past 8 years Mr. Russell has been instrumental in the development of wrapping machines and roll-type heat-sealing labels at Oliver Machinery Co., Grand Rapids, Mich.

Link-Belt Co., Chicago, Ill., has named Bert L. Pearce to the position of engineer of the Ewart plant in Indianapolis, Ind., succeeding Charles R. Weiss, retired. For the last 10 months Mr. Pearce had been assistant chief engineer for product design. Russell T. Sweeney has been appointed assistant chief engineer.

New Departure Div., General Motors Corp., Bristol, Conn., has named Charles D. McCall, former manager of the division's regional sales office in Detroit, Mich., to succeed Frank J. Miller as general sales manager. Mr. Miller has terminated his association with the firm for reasons of health. Lorne F. Lavery has been transferred to Detroit, and Howard A. Offers has become assistant general sales manager at Bristol.

JOHN B. DAVENPORT has joined the Foster Machine Co., Westfield, Mass., sales force. He will travel in northern New England and the Midwest. He has been with the company since 1939, including four years in the Air Force.

Reeves Pulley Co., Columbus, Ind., has appointed Peerless Engineering Sales Ltd., Toronto, Ont., its representative in Canada. A branch office and warehouse have been opened in Montreal, Que. Len Hackert is the new Montreal branch manager.

J. E. Rhoads & Sons, Philadelphia, Pa., is celebrating this month the completion of 250 years of leather-belting and industrial-leather service to American manufacturers. Established in 1702, the firm is said to be the oldest active partnership in U. S. industry today.

Alexander Smith, Inc., Yonkers, N. Y., has named Edmund S. Lamont sales engineer for the Products Division. In

Stonecutter Mills, Spindale, N. C., manufacturers of "Fabrics of Distinction"

What Makes a Mill Really Modern?

Section of the Preparatory Department at Stonecutter Mills—Worthington centrifugal refrigeration supplies chilled water for air conditioning.

This is as modern-looking a mill as you've ever seen, isn't it?

It's Stonecutter Mills at Spindale, N. C.—a pioneer in weaving of quality dress fabrics of synthetic yarns.

Now look inside—in the Preparatory Department—which includes tinting, sizing, drying, twisting and other operations to prepare the yarn for weaving. You can see its modern equipment, floor to ceiling.

• • •

And if you were there, you'd get the idea of the modern *air control* — which provides the proper temperature and humidity conditions for the processing, and which also, by filtering the air, keeps the mill and the products "spick and span".

• • •

This modern mill uses the *most modern* air conditioning equipment—Worthington.

A 750-ton Worthington centrifugal refrigeration system furnishes chilled water for air-conditioning the Preparatory Department. And the offices are air-conditioned by six Worthington package air conditioners, providing a total of 80 tons of refrigeration.

This system, engineered and installed by the Bahnson Co. of Winston-Salem, N.C., who manufactured the air handling portion of the equipment, is typical of the preference for Worthington refrigeration for air conditioning throughout the textile industry. From the complete Worthington line, any mill can find the right refrigeration equipment for its air conditioning needs.

For *more worth in Worthington* write Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J.

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AIR CONDITIONING AND REFRIGERATION

Whatever your product is, if it is expected to withstand sunlight during its service life it should be tested in an Atlas Fade-Ometer.

Because the Fade-Ometer accurately reproduces natural sunlight in your laboratory, it can tell you (in just a fraction of the time required by actual outdoor exposure) whether your product will fade, whether its finish will crack or peel, or how it will react to certain conditions of temperature and humidity. Information of this type has been proved invaluable in the development of a new product or simply for controlling production line quality of an existing one.

From 21 to 126 samples can be simultaneously tested in the Fade-Ometer. Operation of the machine is completely automatic, and it may safely be left in unattended continuous operation overnight.

Extensively used to comply with government and civilian specifications.

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256 For more information, write direct or use Reader Service post card.

News About SUPPLIERS (Continued)

DONALD MARSHALL (left) has been appointed division manager of Draper Corp., Hopedale, Mass., and Atlanta, Ga., to be in charge of sales and service in the Carolinas and Virginia, with headquarters at Spartanburg, S. C. All other Southern states and Oklahoma and Indiana are under the division managership of WILTON KILGORE (right), with headquarters in Atlanta, Ga. Walter M. Mitchell, vice president in charge of Southern activities, will continue to divide his time between both territories.

his new position, Mr. Lamont, formerly with Monsanto Chemical Co., Merrimac Div., will direct the marketing of processes and products developed by the division.

Twin Disc Clutch Co., Racine, Wis., and Rockford, Ill., has created and filled two new vice presidencies. G. L. Shuman is now vice president-finance and secretary. R. G. DeLong is now vice president, hydraulic division.

Universal Winding Co., Providence, R. I., has elected Charles C. Bell and Winthrop S. Warren vice presidents of the company. Mr. Bell, director of research and engineering, and Mr. Warren, domestic-sales manager, will both continue in their respective capacities.

Veeder-Root, Inc., Hartford, Conn., is erecting a new modern building on Route 29 between Greenville and Spartanburg, S. C. When completed, it will replace the present company offices in Greenville.

Warner Electric Brake & Clutch Co., Beloit, Wis., has made Paul Harter chief project engineer of its industrial division. Mr. Harter joined the company in 1947. Kenny Consolidated Engineering Industries, Ltd., Toronto, Ont., has been named Ontario representative for the Warner line of control equipment.

Whitney Chain Co., Hartford, Conn., has appointed Harold W. Beder, Jr., general sales manager. Mr. Beder was formerly associated with McKinsey Co., New York.

Chemical and Yarn Suppliers

American Viscose Corp., New York, has appointed Malcolm V. Macfarlan manager of the viscose-rayon sales division, succeeding William G. Luttge, named general sales manager for Chemstrand Corp. Mr. Macfarlan was most recently assistant manager of the division. John R. Fenimore, Jr., has been promoted to staff engineer at the company plant at Roanoke, Va. J. Reid Durbin of Textile Research Dept., Marcus Hook, Pa., has been transferred to the staple-sales division in New York.

Carbide & Carbon Chemicals Co., New York, has named Arthur L. Snyder assistant sales manager for apparel and Robert K. Kennedy as advertising manager of the textile-fibers department. Robert W. Gaines has been made head of industrial and household-use sales and sales development of dynel. Mr. Snyder was formerly technical manager of the flat-goods division of Burlington Mills Corp.

Celanese Corp. of America, New York, has named R. Finley Thompson assistant to the plant manager and Donald W. Chappell superintendent of the

The USTER Warp Tying Machine

makes difficult jobs easy!

This photograph illustrates a typical example. The space behind the loom is limited and partly obstructed. The tied nylon ends must be pulled or woven through a maze of harnesses and drop wires, and without breakage. The sley is heavy and pattern fancy.

Here, the Uster Warp Tying Machine is shown doing its job with speed and efficiency. The savings *per warp* are tremendous. . . .

Man hours saved.....19½
Material saved.....5 yards
Loom down time saved.....50%

You, too, can cut your warp preparation and tying costs with the Uster Machine. Whether tying cotton, wool, worsted, rayon, nylon, asbestos, plastic, or warps containing a combination of different yarns, the Uster Machine will do the job right and with ease—operating either portable or stationary. It is the fastest, most efficient and versatile warp tying machine built.

In Canada: Hugh Williams & Co., 47 Colborne Street, Toronto, Ontario

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Sales Offices: Boston—Philadelphia—Atlanta

Minimum Cost Automatic Wrapping

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DESCRIPTIVE LITERATURE ON REQUEST

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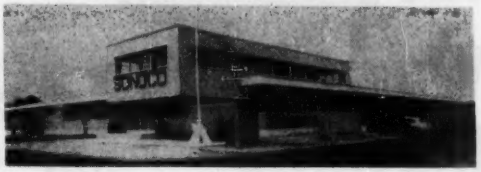
WRAPPING MACHINES

Automatic wrapping on the Hayssen costs less because the Hayssen requires only a modest capital investment . . . is fully automatic . . . sturdily built for a long operating life . . . and has a minimum of moving parts. Packages are trim in appearance and printed wrappers registered by Hayssen Electric Eye. Write for the Hayssen story and the name of your Hayssen representative. Prompt, friendly service.

HAYSSEN MFG. COMPANY • SHEBOYGAN, WIS.

News About SUPPLIERS (Continued)



SONOCO PRODUCTS CO., Hartsville, S. C. recently opened its new plant at Mystic, Conn. The brick structure, containing approximately 63,000 sq. ft. of floor space, consists of a single story of manufacturing area. The office section is on the second floor. G. W. Blunt White is vice president in charge of Northern operations at Mystic.

cellulose-acetate department at the Narrows, Va., plant. Mr. Thompson joined the company in 1927 and Mr. Chappell in 1935.

Chemstrand Corp., Decatur, Ala., recently appointed William G. Luttge sales manager to handle sales of both Acrilan and nylon. Mr. Luttge since 1945 had been manager of the viscose-sales division of American Viscose Corp. F. William Koster, secretary of the company and manager of the Acrilan plant under construction at Decatur, has established offices at Decatur preparatory to bringing the plant into commercial production next spring. He had been managing the 1,000,000-lb.-per-year Acrilan pilot plant at Marcus Hook, Pa.

Columbia-Southern Chemical Corp., Pittsburgh, Pa., has made several new appointments: H. W. Gleichert, assistant to the vice president in the new sales organization; E. W. Haley, director of sales; C. F. Bingham and J. F. Dockum, assistant directors of sales; P. A. Fodor, Philadelphia, Pa., district-sales manager; and R. M. Simpson, acting manager of pigment sales.

Dow Chemical Co. of Canada Ltd., Sarnia, Ont., has completed a 17,000-sq.ft. addition to its chlorine-cell building and a four-storied addition to the Styron unit. Construction of the $1,000,000 ammonia plant is well under way.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., has named Edward R. McLean, former assistant to the manager, to the position of manager of the planning section of the nylon division, succeeding Cantwell Clark, retired. Dr. Edward F. Wesp, assistant manager of the rayon-planning division, has been made assistant director of production for Orlon acrylic fiber. The company expects its new addition in the nylon spinning, inspection, and shipping departments at Martinsville, Va., to be completed next month.

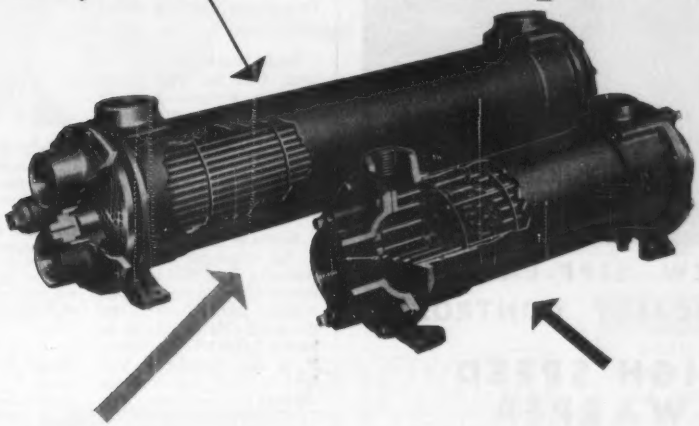
Glyco Products Co., Inc., Brooklyn, N. Y., has appointed Jack H. Dollinger sales manager. Acting as assistant sales manager and technical assistant to the executive vice president since 1946, Mr. Dollinger came up through the research and development laboratories of the company.

Industrial Rayon Corp., Cleveland, Ohio, has promoted George C. Miller to the position of sales manager of the textile-yarn division. Mr. Miller joined the corporation in 1945 and has been in sales since 1949.

Owens-Corning Fiberglas Corp., Toledo, Ohio, has named William M. Keller general factories manager of the Fiberglas textile-products division. Since March, 1950, Mr. Keller has been manager of the Huntingdon, Pa., Fiberglas textile plant. Appointed to succeed him at Huntingdon is Lloyd S. Wainfor, who served most recently as production manager there.

Pittsburgh Plate Glass Co., Pittsburgh, Pa., will enter the fiber-glass production field in the near future. Formation of a separate development and production unit to be known as the fiber-glass division is now in process. Two types of fiber glass, strand fiber and super-fine fiber, will be manufactured under licensing agreement with Owens-Corning Fiberglas Corp. The new division will be headed by J. Her-

the PRE-SOLVED answer to your heat transfer problems



Textile mill operators and machinery builders, in ever increasing numbers, are discovering that Ross Exchangers are the pre-solved answer to many heat transfer problems.

Indeed, one heat transfer problem after another has readily yielded to quick solution by the application of a pre-engineered, fully standardized Ross Exchanger . . . until today these units are paying off in practically all phases of textile operations — dye liquor heating, pre-heating for bleaching, heat removal in mercerizing, solution cooling in dry cleaning, salvaging heat from waste process water . . . and in many, many other ways.

The Ross technique of mass producing standardized components and sub-assemblies into pre-engineered designs and sizes *saves* — in time and money — the costly delays and expense of custom-engineering and fabrication.

Ross Exchangers are made in materials to withstand all degrees and conditions of rust and corrosion: all-copper and copper alloy, all-stainless steel, other proven materials . . . and there is promptly available to you, through pre-engineering and complete standardization, a size and type that is the answer to your heat transfer problem.

So whether you are a manufacturer of textile machinery or a mill operator, look to Ross for the pre-solved answer to all your heat transfer problems — the pioneer and the leader in standardized heat exchanger design and manufacture.

Write for descriptive literature. By stating briefly your application, specific information can be directed to your needs. Ross Heater & Mfg. Co., Inc., Division of American Radiator & Standard Sanitary Corp., 1444 West Avenue, Buffalo 13, N. Y. In Canada, Horton Steel Works, Limited, Fort Erie, Ont.

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EXCHANGERS

Serving home and industry

AMERICAN STANDARD · AMERICAN BLOWER · ADE CABINETS · CHURCH SEATS · DETROIT LUBRICATOR · KEWANEE BOILERS · ROSS HEATER · TONAWANDA IRON

Meeting the Test of Actual Mill Operation

THE NEW SIPP-EASTWOOD ELECTRICALLY CONTROLLED

HIGH SPEED WARPER

—the speed of the machine is limited only by the yarn in mills where only the most efficient equipment is tolerated. It builds beams up to 36 inches in diameter, 54¼ inches or wider between heads, with practically no vibration because of smoothly applied power and extra heavy construction.

FEATURES THAT ARE OUTSTANDING:

1. Stepless automatic electrical control of warp speed 1% maximum variation.
2. Electrical indication of speed at all times.
3. Finger-tip controls throughout.
4. Static eliminator.
5. Motor-mounted magnetic disc brake.
6. Magnetically operated hydraulic brakes for auxiliary braking of beam, measuring roll and pressure roll, and to hold the beam at a standstill.
7. Separate hydraulic system for handling beams in and out.
8. AC power only required.

Ask for all the facts about this splendid warper.

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47 Keen Street **Paterson, New Jersey**

DOMESTIC AGENTS:

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Charlotte 1, N. C.

J. S. FALLOW & CO.
New Bedford, Mass.

News About SUPPLIERS (Continued)

vey Sherts, who will serve as general manager.

Royce Chemical Co., Carlton Hill, N. J. has appointed R. L. Jones to the position of sales manager of its textile division. Mr. Jones has been selling for the company in Pennsylvania territory since 1935.

Seydel-Wooley & Co., Atlanta, Ga., has made J. E. Spearman a representative in sales and service work, to sell to the wet-finishing division of the industry. He had previously been associated with North American Rayon Corp. and American Enka Corp.

Synthron, Inc., Ashton, R. I., has appointed George L. Browning, Jr., a field technical representative, to represent the company in the Southern textile states. He expects to be located in the Winston-Salem, N. C. area. Ludwig P. Vollers, Jr., will represent the company in Pennsylvania, New York, and New Jersey. He will work out of the Philadelphia, Pa., office.

Wyandotte Chemical Corp., Wyandotte, Mich., has added

TOM CHEETHAM, a member of the industrial-sales department of Colgate-Palmolive-Peet Co., Jersey City, N. J., since 1945, has been assigned to cover textile mills exclusively throughout New England. James P. Daly and William J. Murray, former New England textile-mill salesmen, will concentrate on other types of industrial consumers.

Russell D. Ring, recent Oklahoma A & M M.S.-degree receiver, to its research-development division at Wyandotte. He will work on the application of radio active tracers in the measurement of efficiency of cleaning agents and processes.

Other Services

Clemson College, Clemson, S. C., recently conferred honorary degrees on 28 leaders in industry, agriculture, and government at a "Textile Day" arranged for formally dedicating the new J. E. Sirrine textile building on the campus. Textile-Industries doctorates were received by William H. Beattie, Harold Blancke, Henry M. Bliss, James F. Byrnes, Robert H. Chapman, Charles E. Daniel, Benjamin B. Gossett, Francis E. Grier, Lawrence O. Hammett, Robert E. Henry, Henry P. Kendall, Leon Lowenstein, Ellison S. McKissick, Ralph T. Marshall, Roger Milliken, Walter S. Montgomery, James C. Self, Robert T. Stevens, Samuel H. Swint, Frederick W. Symmes, and George M. Wright.

Institute of Textile Technology, Charlottesville, Va., has received from American Cyanamid Co., New York, a $5,000 two-year graduate-fellowship grant for a course of studies in textile chemistry leading to an M. S. degree in textile technology. Richard P. Barber, Taunton, Mass., a graduate of Bradford Durfee Technical Institute, has been selected by the institute to study under the fellowship until June, 1953.

Lowell Textile Institute, Lowell, Mass., has received accreditation from the Engineers' Council for Professional Improvement for its textile-engineering department. Dr. Chapin A. Harris, head of the department of synthetic textiles, has been appointed director of the Graduate School.

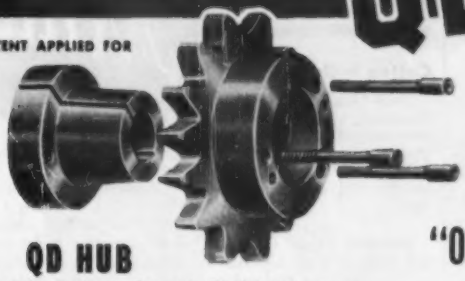
Charles T. Main, Inc., Boston, Mass., has opened a Southern office in Charlotte, N. C. T. H. Salford is in charge of the new operation.

Werner Textile Consultants, New York and Larchmont, N. Y., has established a new long-fiber division under the direction of Cerminal Giraudi, former European textile engineer with Italian and French experience.

FORT WORTH QD ROLLER CHAIN SPROCKETS

WITH TAPERED SPLIT HUB

PATENT APPLIED FOR

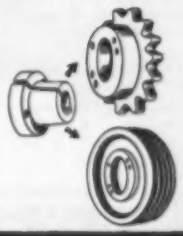


ELIMINATE REBORING!

QD HUB ALSO FITS QD V-Belt Sheave

Speed changes are simplified and "spare" sprockets can be carried more easily.

If your favorite distributor doesn't stock this new item, tell him about it. He'll reward you with better service.



"OFF THE SHELF" SERVICE AVAILABLE FROM INDUSTRIAL DISTRIBUTORS

Reboring of stock bore sprockets to fit various shafts is eliminated due to the various bores available in the QD hub. Installation and removal from the shaft is made easy by the tapered fit of the hub and sprocket. Hub assembly grips the shaft equivalent to a "press fit."

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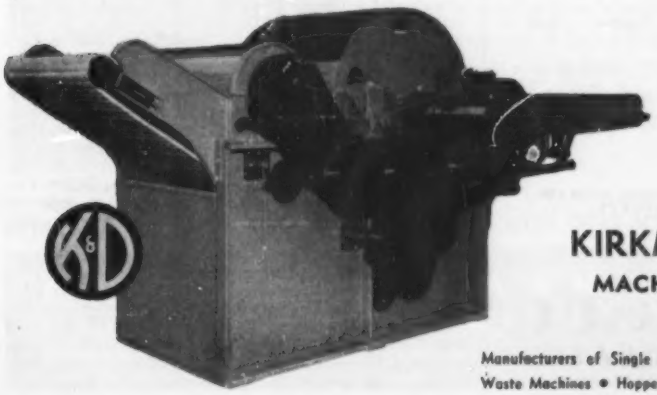
10-POINT BETTER WASTE-PROCESSING WITH K&D SINGLE CYLINDER MACHINE

The revolutionary new principle of shredding waste twice on a single cylinder—more completely and with less stoppage than other machines employing two cylinders—has cut waste processing costs in half. Learn for yourself the profits in K&D 10-point superiority. Write today for illustrated booklet, cost, and complete details.

1. Gives double action with better results on a single cylinder.
2. 60% fewer gears, sprockets, chains, etc.
3. Eliminates need for fans and dust rooms.
4. Reduces fire hazard.
5. Occupies just half mill floor space.
6. Reduces nipping and chewing of fibers.
7. Safety guards for gears, sprockets, and chains.
8. Uses 7½ HP motor to cut power costs.
9. Fewer stops, less down time, lower repair costs.
10. Renders larger percentage usable fiber.



KIRKMAN & DIXON MACHINERY COMPANY

Greenwood, S. C.

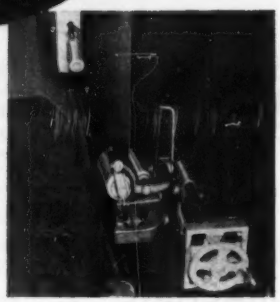
Manufacturers of Single Cylinder and Tandem Application Waste Machines • Hoppers • Parts for Opening and Picking

You can

CUT PRODUCTION COSTS AND IMPROVE QUALITY *with*

Mount Hope

PRECISION GUIDERS



Precision Guiders with Bracket Stand Mounting adjustable for cloth widths from 18" to any maximum.

Mount Hope Precision Guiders control lateral movement of *all* types of fabrics within extremely narrow limits.

Purely mechanical — Positive — Safe — Automatic.

ANOTHER Mount Hope CLOTH HANDLING DEVICE

FOR FULL DETAILS, WRITE FOR BULLETIN PG

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET • TAUNTON • MASSACHUSETTS

262 For more information, write direct or use Reader Service post card.

NEWS ABOUT Mills

Cotton Mills

Abney Mills, Woodruff Plant, Woodruff, S. C., is installing new air-conditioning plant for its weave room. Further installations of air-conditioning are expected in the near future.

American Thread Co. Merrick Mills in Holyoke, Mass., will be closed by the end of the year because the volume of business does not justify continued operation, the company has announced.

Anniston Mfg. Co., Anniston, Ala., has closed bids for a one-story addition to be used for cloth storage. J. E. Sirrine Co., Greenville, S. C., is the architect and engineer.

Bates Mfg. Co., Lewiston, Me., is reported planning to buy or build a mill in the South.

Borden Mills, Inc., Kingsport, Tenn., has started construction of a plant addition to be used for first aid and office facilities. The company is also installing a new conveyor system that will automatically carry yarn from the spinning department to spooling and then to weaving.

Dan River Mills, Inc., Danville, Va., will spend $2,750,000 on a new steam-generating-station addition. One new boiler will be installed to replace nine that have been in operation for the past 40 years. Turbo-generator contract has been awarded to General Electric Co., Schenectady, N. Y.

Deering, Milliken & Co. Drayton Mills, Spartanburg, S. C., is nearing completion of a $500,000 expansion program. The program includes a new 55,000-sq. ft. twister building, an apparatus building for air conditioning, and excavation of a basement area to provide an addition to the weave room and a new cloth-grading room.

Deltox Rug Co., Oshkosh, Wis., has awarded a contract to Ben B. Ganther Co., Oshkosh, for two one-story additions, 30x100 ft. and 48x51 ft., to be used for warehouse and shipping service respectively.

Graniteville Co., Graniteville, S. C., is installing a new 100,000-lb.-per-hour Babcock & Wilcox steam boiler that is designed to use oil or gas as fuel. The boiler is expected to be in operation in the near future. The company has extended railroad tracks for fuel handling and has installed two above-ground tanks with a capacity of 285,000 gal. of oil.

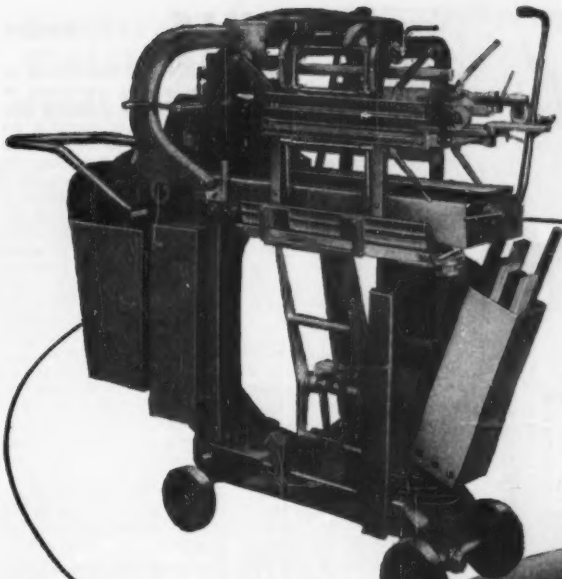
Hoffman Tape Mills, Cheltenham, Pa., is rebuilding its factory, which was destroyed by fire. Cost will be $70,000. The new building will contain more space than the former one. Northeast Constructors, Philadelphia, is contractor.

Jewel Cotton Mills, Thomasville, N. C., has started construction of two new buildings of brick, steel, and concrete. The first unit, which will measure 104x30 ft., will be constructed on the east side toward the front of the present buildings. The second unit, 56x96 ft., is being added at the back of the present structure. New units will provide office space and additional space for the carding department. Machinery in the carding department will be increased by one-third. Completion is expected by January, 1952. Kaylor Co., Gastonia, is contractor. Sharman B. Laws is resident manager.

Kendall Co., Mollohon Div., Newberry, S. C., which has had a modernization program under way at a cost of about $500,000, expects the program to be completed around the middle of this month.

Lawtex Corp., Dalton, Ga., has completed an expansion program that increases plant operations by 25%.

Montreal Cottons Ltd., Valleyfield, Que., has awarded a contract for erection of a $10,000 boiler-room addition to its plant on Chausse St., Valleyfield. Iddon & Cornell, Inc., Montreal, is the contractor.



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Reduce Costs!
Increase Production!
Improve Products!

TIES IN EITHER PLAIN OR LEASED WARP WITH EQUAL SPEED AND EFFICIENCY

Model "LL" machine set up for tying in a plain cotton warp.

The same machine as above, now set up for a leased cotton warp.

BARBER-COLMAN *Portable* WARP TYING MACHINE

A Barber-Colman PORTABLE Warp Tying Machine can be a *very profitable* investment for you. This machine offers a fast and accurate means for tying-in new warp *at the loom.* It can be handled in confined and hard-to-reach places and in loom alleys as narrow as 12". Overall production capacity averages 3500 to 4500 ends per hour, higher on high sley warps. Models are available to handle cotton, wool, worsted, silk, or synthetics (including monofilaments) and plain warps or leased warps or both. Tying is accurate and uniform and so much more efficient than common hand methods that the machine will pay for itself quickly in cost savings *even when not in constant use.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

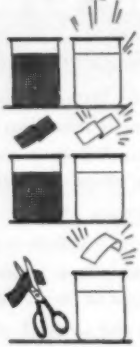
HOW TO PREVENT IRON STAINS . . .

Try this experiment!

Versene T
BEAKER #1
(one liter) 500 cc of 5% caustic soda solution plus 5 cc of 0.1 Molar Ferric Chloride (27 gms. $FeCl_3.6H_2O$ per 1000 cc water).
BEAKER #2
Same contents as Beaker #1 but with 5 cc of Versene T added.

PROCEDURE BY STEPS

First, add the caustic to each beaker. Then, to Beaker #2, add 5cc of Versene T. Heat both beakers to boiling point and add the 5cc of the Ferric Chloride to each beaker. Note the difference between the solutions. Beaker #1 (containing no Versene T) is muddy with rust. Beaker #2 is water-white. Next, put a small strip of clean white cotton cloth in each beaker and boil a few minutes. Remove strips and rinse with water. Note the difference. Versene T has kept its strip white in spite of the iron that was added.



Last, take the other rust-stained strip, cut in half and place one-half in Beaker #2 containing the clear solution with the Versene T in it. Boil for a few minutes. Remove, rinse and compare. The Versene T has now restored the rust-stained cloth to its original whiteness.

VERSENE T — FOR ANY CAUSTIC SOLUTION. Test Versene T now. Then try it in your own caustic solutions. It does on a commercial scale exactly what it will do in the laboratory. Write Dept. D. Send for Technical Bulletin #2. Ask for samples.

NEW VERSENE WATER TEST KIT. Tells total hardness in two minutes. Accurate to one grain per gallon. Versenate Method. Complete Kit $5. Postpaid.

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Wasatch Chemical Co., Salt Lake City, Utah
Barada & Page, Inc., Dallas and Houston, Texas
Associated Chemical Co. of Canada, 14 Darrell Ave., Toronto, Ontario
Chas. S. Tanner Co., 1815 Liberty Life Bldg., Charlotte, North Carolina

News About MILLS (Continued)

Opelika Mfg. Corp., Opelika, Ala., has closed bids for a one-story addition to its present two-story mill. Robert & Co. Associates, Atlanta, Ga., is the architect and engineer.

Scranton Lace Co. has sold its weaving and finishing mill at Kingston, N. Y., to Sprague Electric Co., North Adams, Mass. The finishing equipment has been sold to Industrial Products of America, Paterson, N. J.

Spray Cotton Mills, Spray, N. C., has let general contract to McKey-Helgerson Co., Greenville, S. C., for two three-story additions to the mill. J. E. Sirrine Co., Greenville, is the architect and engineer.

Springs Cotton Mills, Lancaster, S. C., is building an addition to the finished-goods warehouse at its Grace Bleachery. The addition will add 120,000 sq. ft. of space in a three-story building. It is expected to be completed early in 1952.

Standard-Coosa-Thatcher Co. is installing Aldrich Machine Works openers and pickers in its Piedmont, Ala., mill. Air-Mat lint arresters made by American Air Filter Co. will handle dust from the openers and pickers.

Superior Waste Co., Providence, R. I., has arranged to change the company name to Superior Cotton Co.

United Felt Co., Chicago, Ill., plans a one-story addition, about 16,000 sq. ft. of floor space. Cost is reported close to $130,000. A. Epstein & Sons, 2011 West Pershing Rd., Chicago, is the engineer.

Utica & Mohawk Cotton Mills, Inc., will discontinue its manufacturing operations at Utica, N. Y., where the company has been operating for 103 years. Discontinuance of operations at the Broad St. mill is expected by early 1952. Executive and administrative offices will be located at the plant near Clemson, S. C. The move will not affect operations at Utica-Willowvale Bleaching Co., Chadwicks, N. Y., until the latter part of 1952. The company is nearing completion of its new plant near the present Seneca Div. at Seneca, S. C. The new plant will be known as Utica-Mohawk Div. and will contain both cotton mill and bleachery as well as the main office of the company. It will contain about 550,000 sq. ft. of floor space. Provision has been made for a boiler plant, filter plant, and other necessary buildings and machinery to make this a completely integrated unit from raw cotton to finished product.

West Point Mfg. Co., Langdale Div., Langdale, Ala., has begun construction of a three-story addition to Mill No. 2. The addition will be used to increase production of cotton duck. Completion is expected by April, 1952. Entire cost of construction and new equipment will be approximately $172,000. Batson-Cook Co., West Point, Ga., is the contractor. Robert & Co. Associates, Atlanta, Ga., is engineer.

Woods Mfg. Co. Ltd., Empire Cottons Div., Welland, Ont., has begun a long-term modernization program that is expected to be completed in three years. Some 600 Saurer looms are to be installed. Purpose of the project is to improve quality rather than increase production.

Woolen and Worsted Mills

American Felt Co., Glenville, Conn., has begun a relocation and expansion program at its plant in Newburgh, N. Y., at an estimated cost of $100,000. Ground was recently broken for a cotton warehouse to cost $30,000. Construction plans call for a concrete warehouse with several ramps and piers for loading, a new picking and blending house, extension of shipping rooms, and relocated offices. Various types of felt will be manufactured, including kinds used in airplanes, ammunition belts, rockets, clothing, automobiles, and surgical supplies. Walter H. Dolge, superintendent; Bela Freyer, manager; and Gilbert Sanford, engineer and research man, are jointly directing the project.

American Hair & Felt Co., Milwaukee, Wis., has awarded a contract to F. Kutschenreuter, Milwaukee, for an addition to its power house. Estimated cost is about $300,000, with equipment.

Duesberg-Bosson WOOLEN CARD and PERALTA MACHINE

(PATENTED)

Shown here: 3-cylinder set, with Peralta Machine. Also available in 2-cylinder and 4-cylinder sets

All foreign matter entangled in the web as it passes from the doffer is pulverized by the two Peralta Rolls, thereby eliminating this foreign matter from the stock.

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A new 2-cylinder carpet card now in operation in the Duesberg-Bosson Woolen Spinning Co., Jefferson, Mass., is causing great interest.

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News About MILLS (Continued)

American Woolen Co., Lawrence, Mass., has shipped several W3 Crompton & Knowles convertible automatic looms from its Ayer Mills, Lawrence, Mass., to the plant recently acquired at Raleigh, N. C. The Raleigh plant has a capacity for 96 looms, 12 of which will come from the Ayer mill. Some spinning frames and looms from Wood Worsted Mill will also be used.

Broadalbin Mills, Inc., Broadalbin, N. Y., will undergo plant and management changes in the near future if satisfactory arrangements can be made in a move to put the mills on a profitable basis. Plans call for conversion of the plant from knitting to weaving of woolens, if looms can be obtained.

Brunswick Worsted Mills, Coventry, R. I., has arranged for an increase in capital to $1,070,000 for general operations.

Deering, Milliken & Co., New York, N. Y., is constructing a new woolen mill in Columbus, N. C. Cost is reported to be $2,000,000.

Greenville Mills, Inc., Greenville, N. C., subsidiary of Artloom Carpet Co., Philadelphia, Pa., has purchased a plant and plans further expansion.

Laurens, S. C.—Municipal officials have let a contract to Potter & Shackleford, Inc., Greenville, S. C., for a new mill to be occupied by Woonsocket Worsted Co., Woonsocket, R. I., under lease. McPherson Co., Greenville, is architect and engineer.

James Lees & Sons Co., Bridgeport, Pa., is accepting preliminary bids for construction of a new $600,000 building near Glasgow, Va. The building will be one-story, of brick on cinder block, and will cover an area 250x300 ft.

Mohawk Carpet Co., Amsterdam, N. Y., has begun operation of a new mill at Mexico City, Mexico. The plant has about 56,000 sq. ft. of floor space and cost about $1,000,000. A subsidiary interest, Carpetas Mohawk de Mexico, has been organized to operate the mill.

Springfield Woolen Mills Co., Springfield, Tenn., plans a one-story addition to be used for warehouse service. The building will be of brick veneer, 80x100 ft.

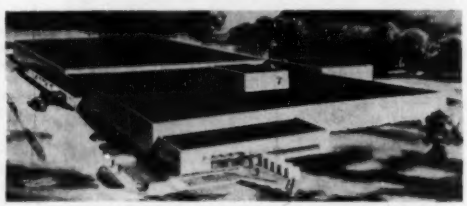
John B. Stetson Co., Philadelphia, Pa., has plans for a new addition, reported to cost about $200,000, with equipment.

Wyandotte Worsted Co., Rochester, N. H., is completing plans for a new one-story dyehouse for handling raw stock. Estimated cost is $40,000.

Synthetics Mills

Artistic Weaving Co., Pompton Lakes, N. J., will build a factory at Homerville, Ga. The new plant will make woven labels, trimmings, and similar narrow fabrics.

Borg Fabrics Ltd., Elmira, Ont., in joint operation with George W. Borg, Delavan, Wis., has begun production of a nylon-pile fabric. The company is operating in a one-



NEW GAYLEY MILL, Marietta, S. C., a unit of Deering, Milliken & Co., Inc., has completed its first section, which contains 100,000 sq. ft. of totally enclosed, air-conditioned space for warp knitting of nylon fabrics. An additional section of approximately the same size, to be built as soon as materials are available, will contain finishing facilities for the plant's production. Gross investment for the project is reported to be in excess of $3,000,000. Daniel Construction Co., Greenville, S. C., is general contractor.

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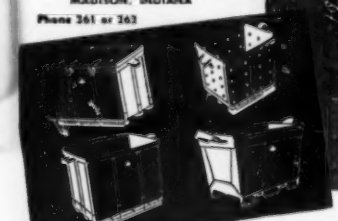

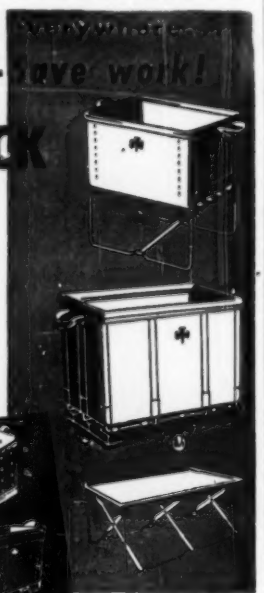

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News About MILLS

(Continued)

story building containing 20,000 sq. ft. of floor space.

Elizabethton, Tenn.—Voters have approved a 50% increase in a $4,000,000 bond issue previously approved for construction of a textile plant to be leased to Textron, Inc. The $6,000,000 proceeds from bonds, plus rental for two years of $500,000 a year, plus $800,000 to be put up by Textron, provides $7,800,000 for the new plant.

Goodyear Clearwater Mills, Plant No. 3, Cartersville, Ga., will begin preliminary grading and other preparation for construction to begin in the near future on an expansion program for rayon tire cord. Present plans call for a one-story building, about 300x280 ft. The plant will be equipped with modern twisting and weaving machinery. Plans are to have the plant in full production by the middle of next summer.

Haynsworth Mill, Anderson, S. C., will build a $94,000 addition to the south end of the building it now occupies on South McDuffie St. The building is owned by a group of Anderson people and is leased to Woodside interests, operators of the Haynsworth Mill. The addition will increase floor space by 17,654 sq. ft. It will be identical with an addition recently completed on the opposite end of the structure.

Hess, Goldsmith & Co., New York, N. Y., has purchased assets of Horace Linton & Bro., Inc., narrow fabrics, Philadelphia, Pa., and Pleasantville, N. J. The plants will be operated as Horace Linton Div. Wallace R. Linton has been appointed vice president of the division.

International Braid Co. of Canada Ltd., Ste. Rose de Laval, Que., has recently installed several narrow-fabric looms and finishing equipment for the manufacture of elastic and non-elastic webbings. These products, made from cotton, rayon, nylon, and other yarns, will supplement the company's present range of braided products.

Keystone Weaving Mills, Inc., York, Pa., has installed a Hermas machine in its cloth room.

Lorraine Yarn Mills, Inc., Philadelphia, Pa., was recently organized with $100,000 capital. The company occupies a plant containing all new machinery. Arthur LaPierre, formerly owner and president of LaPierre Industries, Inc., is president. Yarns for weaving and knitting will be spun.

J. B. Martin Co. Ltd., St. Johns, Que., a division of J. B. Martin Co., Norwich, Conn., is proceeding with a sizable expansion of its dyeing and finishing facilities.

Mason Silk Co., Winsted, Conn., has closed bids for a new addition to the mill. Jackson & Solstead, Passaic, N. J., is the architect.

Milan, Italy—Rhodiatoce Co. is building a plant to produce 50,000 kilos of nylon monthly, equally divided between filament yarn and staple. Machinery will be supplied largely by Italian firms.

Peerless Mills, Belton, S. C., has a $2,000,000 rayon-weaving mill nearing completion and is scheduled to go into partial operation this month. All machinery should be installed in the plant by early January. The plant will have 480 looms and will employ 150 persons.

Petare Textile, Caracas, Venezuela, will soon begin construction of a rayon-fabric mill to cost 3,500,000 bolivars. Modern equipment for the plant has already been acquired. The new mill will be built on a 45,000-sq-meter site in Petare, near Caracas.

Sociedad Nacional Industrias Aplicaciones Celulosa Espanol, Torrelavega, Spain, will install machinery manufactured by Kuljian Corp., Philadelphia, Pa., for a new continuous process of rayon spinning.

J. P. Stevens & Co., Inc., will consolidate the greater part of its New York operations at 1460 Broadway, New York, where it has leased a sixteen-story building, nearing completion, that will be known as the Stevens Building. All of the company's cotton-division activities, now at 44 Leonard St., will be moved uptown. The rayon division's offices, now at 1410 Broadway, will also be moved to the new quarters.

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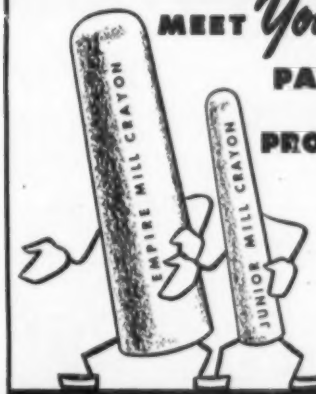

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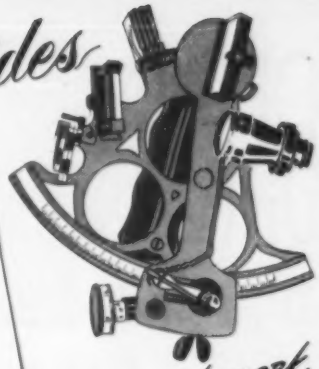

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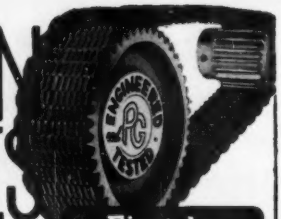

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News About **MILLS** (Continued)

Knitting Mills

Baumont Hosiery Co., Philadelphia, Pa., a partnership, is being organized by Frank Baumgartner, former vice president and superintendent of Signature Hosiery Co., North Wales, Pa. Baumont Co. will knit women's unbranded full-fashioned hosiery, 51-gauge, 15-den. nylon and 51-gauge, 30-den. nylon. Names of other officers were not disclosed. The concern will occupy a new 64x69-ft. one-story building and will begin operations with two new 30-section machines with a production potential of about 500 doz. per week.

Berkshire Knitting Mills, Reading, Pa., is building a large new hosiery plant at Andrews, N. C.

Campbell Hosiery Mills, Chattanooga, Tenn., has received a $15,000 loan from the RFC for additional equipment and working capital. Additional equipment purchased from Morris Speizman, Charlotte, N. C., will enable the company to fill out a full range of sizes in infants' and children's socks.

Corinth, Miss.—Municipal officials have a low bid from William Roberts, Corinth, at $45,621 for the erection of a new one-story addition to the local mill of Sanson Hosiery Mills, Inc., to be occupied by that company under lease.

Holeproof Hosiery Co., Milwaukee, Wis., has a building-and-equipment expansion program under way that will cost around $1,500,000 by the end of the year. Included in the equipment will be new throwing equipment.

Newton Knitting Mills, Hickory, N. C., is in the process of reorganization. Horace J. Isenhower is owner.

Ontario Hosiery Mfg. Co. Ltd., Toronto, Ont., is progressing with construction of a new three-story plant building on King St. W., near Bathurst St., Toronto. The building is 90x110 ft., with brick facing and stone exterior trim.

Phoenix Hosiery Co., Milwaukee, Wis., has acquired the complete knitting production of 60-gauge full-fashioned hosiery of Philcord Co., Inc., Monroe, N. C.

Ruby Ring Hosiery Mills, Philadelphia, Pa., has sold its mill property, including two buildings with 48,000 sq. ft. of floor space, to F. C. Castell Co., Philadelphia. Purchase price was $175,000.

Se-Ling Hosiery, Inc., Nashville, Tenn., has been purchased by A. L. Kornman Co., manufacturer of men's clothing. The hosiery mill, which was owned by Prestige, Inc., Philadelphia, has not been operating for some time. Purchase price was $275,000. Hosiery knitting and finishing machinery was not included in the sale.

Seamprufe, Inc., New York, N. Y., has engaged Harold Flood, Ardmore, Okla., architect, to prepare plans for a proposed new mill at Holdenville, Okla., to cost about $700,000.

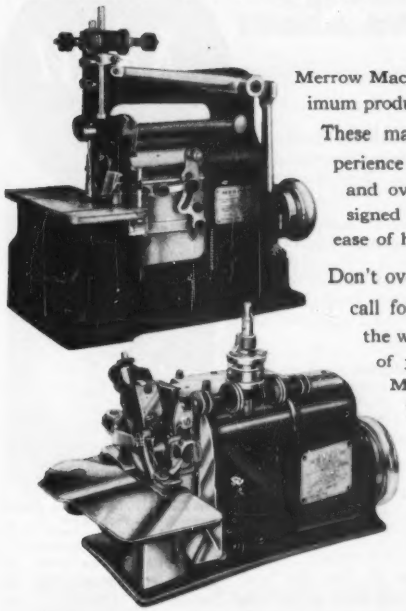
Dyeing and Finishing Plants

Charlotte Finishing Co., Charlotte, N. C., has begun an expansion program in connection with changing from a partnership to a corporation. Incorporators are O. M. Reitan, C. P. Flanagan, and W. R. Robinson.

Creedmor Co., Inc., has been incorporated at Durham, N. C., by Frank Fuller, Jr., and associates to operate a new rayon and nylon finishing plant that is expected to begin operation by Jan. 1. The company has leased 10 buildings with a total floor space of 200,000 sq. ft. at Camp Butler Army post from Yorkshire Associates, Inc. Machinery is being purchased from Mount Hope Finishing Co., North Dighton, Mass. Between 200 and 250 workers will be employed.

Newport, Tenn.—A new hosiery-finishing mill will open here as soon as machinery can be installed. The new company, headed by C. C. Ellis, Burnsville, N. C., has leased the former Neas Laundry property that was previously occupied as a hosiery mill. The firm will specialize in finishing men's hosiery.

Don't overlook Overedging



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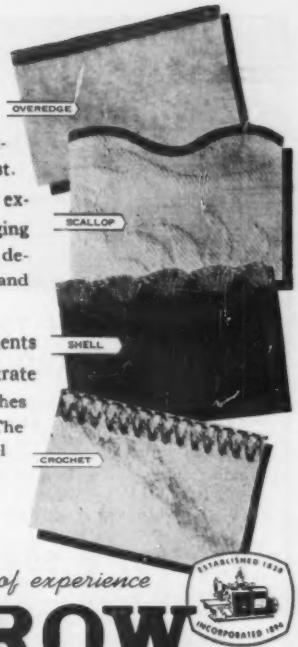

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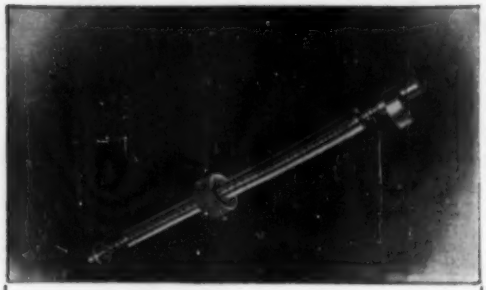

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NEWS ABOUT *Men*

John Anderson has been appointed general superintendent of Oxnegan Mills of American Woolen Co., Old Town, Me.

Stanley F. Anderson, who has been associated with Greenville Mills, Inc., Greenville, N. C., since its establishment by Artloom Carpet Co. a year ago, has been appointed general manager.

Sam Arscott has been promoted to overseer of finishing at Ayer Mills of American Woolen Co., Lawrence, Mass., succeeding **Tom Bruce.**

R. N. Baird has been named coordinator of production and sales for both woolen and worsted divisions of Canadian Wool Co. Ltd., Toronto, Ont.

Robert F. Beh has been named head of the quality-control department of Madison Throwing Co., Inc., Madison, N. C. Mr. Beh was previously associated with Duplan Corp., New York, at its Winston-Salem, N. C., plant.

R. Bleu has resigned as overseer of finishing for Faulkner & Colony Mfg. Co., Keene, N. H.

Ferdinand Bray has been elected vice president of Holyoke Fabrics, Inc., Chicopee, Mass. **Robert E. Enderson, Jr.,** has been made treasurer.

Donald Brophy has become assistant superintendent at United Elastic Corp., Conant Houghton Div., Lowell, Mass.

Tom Bruce has become manager of Morschner Dye Works, Newton Upper Falls, Mass. **Harry B. Rhodes** has become overseer of finishing.

Murray Caplin has been elected president and treasurer of Seamprufe, Inc., New York, N. Y. He succeeds his father, William Caplin, who died Oct. 12.

A. E. Colson has been appointed to succeed **Harry C. Naegeli,** resigned, as manager of Dept. 1 of American Woolen Co., New York, N. Y.

Julian B. Cummings has been named general manufacturing manager for Dominion Textile Co. Ltd., Montreal, Que.

BART BOSSIDY has been named manager of the Rayon Div. of Chicopee Mills, Inc., New York, N. Y. He joined Chicopee in September, 1940, as director of product development. He was later director of market research and manager of the Masslinn Non-Woven Fabric Div.

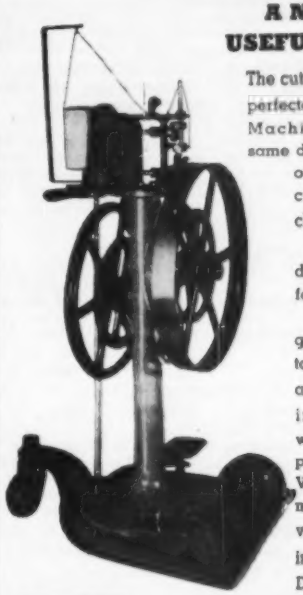
John Cunningham has been appointed to the new post of manager of operations for the Products Div. of Alexander Smith, Inc., Yonkers, N. Y. Mr. Cunningham was formerly assistant superintendent of the company's axminster carpet department.

Rheal E. Daze has been named general manager of Lehigh River Mill, Inc., Northampton, Pa., and Brookdale Mill, Inc., Stroudsburg, Pa. He was formerly production manager of Clinton Silk Mill, Holyoke, Mass.

Louis D. De Loach has been named executive vice president of Glendale Mills, Inc., Glendale, S. C. Mr. De Loach was previously vice president and general manager of the company.

Robert J. Demartini has become chief development engineer at F. C. Huyck & Sons, Rensselaer, N. Y. He was formerly with General Electric Co., Schenectady, N. Y. Mr.

A NEW AND USEFUL MACHINE



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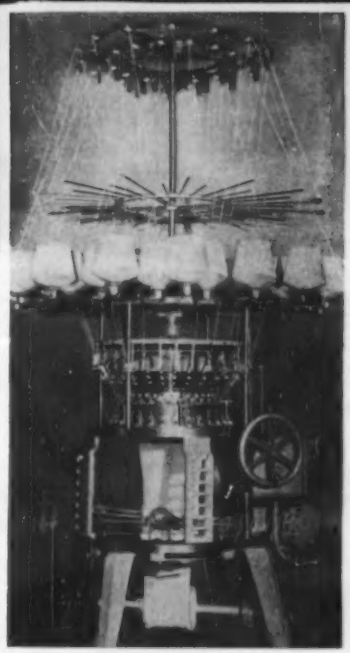

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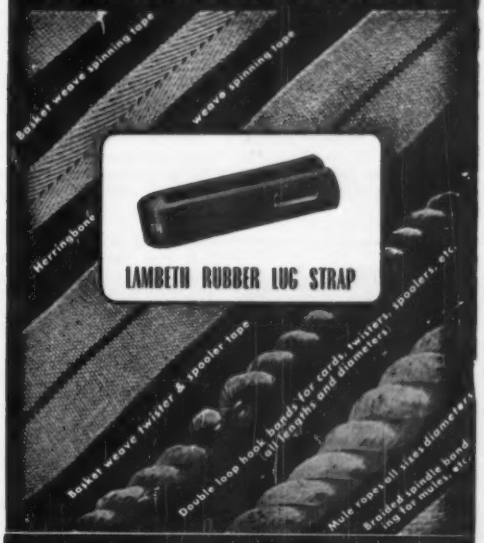
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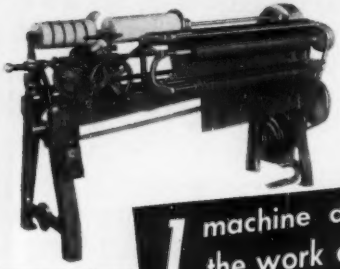

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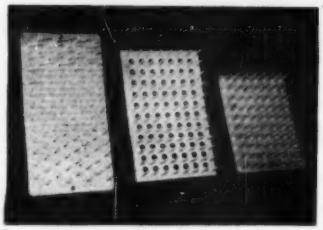

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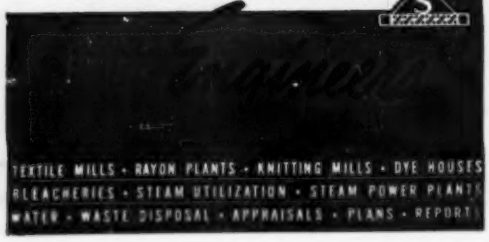

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News About MEN

(Continued)

Demartini succeeds **E. J. Wilson**, who has retired but continues as a consultant.

Paul M. J. Dumas, formerly overseer at Hill Div. of Bates Mfg. Co., Lewiston, Me., has been appointed divisional superintendent, succeeding **Joseph Walmsley**.

Webb Durham, head of Burlington Mills Corp., Tricot Div., Greensboro, N. C., has resigned. He also resigned as manager of the firm's transportation division. His future plans were not announced.

Willard E. Earle has been promoted to superintendent at Wyandotte Worsted Co., Pittsfield, Mass., succeeding **R. L. Small**, who has become superintendent at L. W. Packard & Co., Ashland, N. H.

Elwood M. Eddington has been appointed superintendent of Duplan Dyeing Co. Ltd., Valleyfield, Que.

Clayton Francis, who has been employed at Shelby Cotton Mills, Shelby, N. C., has accepted a position with Southern Woven Label Co., Columbus, Ga.

C. C. Gallman, who has been general overseer of Weave Room No. 2 at Watts Mills, Laurens, S. C., has been transferred to Appleton Co., Anderson, S. C., as overseer of Weave Room No. 1. Mr. Gallman has been succeeded at Watts Mill by **John W. Todd, Jr.**, formerly assistant overseer in Weave Room No. 1, and **John W. Wood, Jr.**, has been promoted from the training instruction department to assistant overseer of Weave Room No. 1.

G. T. Gardner, manager of Cramerton Div. of Burlington Mills, has been promoted to a position on the staff of **J. C. Cowan, Jr.**, president, at the company's executive offices at Greensboro, N. C. Mr. Gardner will be responsible for manufacturing operations of the Cramerton, Decorative Fabrics, and Cotton Yarns Divisions. **James D. Barbee**, assistant division manager, has been promoted to division manager to succeed Mr. Gardner.

Tom S. Harris has been elected president and treasurer of Postex Cotton Mills, Post, Texas, and Sherman Mfg. Co., Sherman, Texas. He replaces **Jesse M. Jones**, resigned.

Adolph Heinze has been made manager of Amana Woolen Mills, Cedar Rapids, Iowa. **John Reihman** and **Mrs. Frank Rind** were named assistants.

Howard Holderness, president of Jefferson Standard Life Insurance Co., and **Kenneth Collins**, an executive vice president of Burlington's New York merchandising organization, have been elected directors of Burlington Mills Corp., Greensboro, N. C.

Martin H. Horchler has become head of the yarn division of Deering, Milliken & Co., New York, N. Y. Mr. Horchler was formerly with Francis Wiley & Co., Boston, Mass., and William Whitman Co., New York.

Earl M. Jambura has been made superintendent of Pendleton Woolen Mills, Pendleton, Ore.

J. D. Jones, superintendent of Barberg Textile Mills, Bamberg, S. C., has been elected to the board of directors.

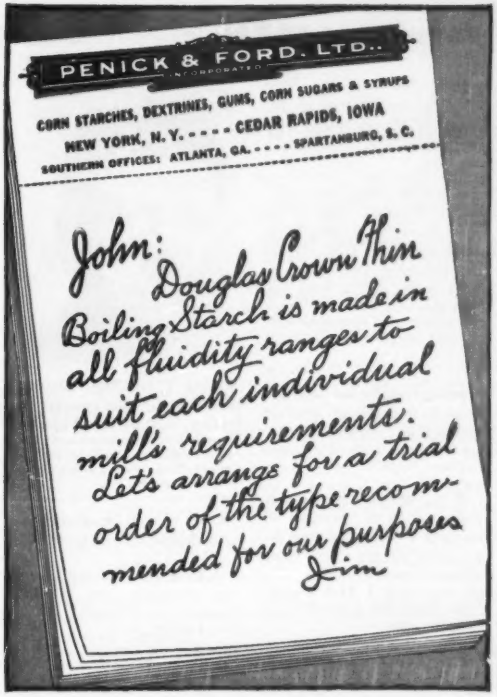
Elmer Kelly has become overseer of finishing for Faith Mills, Averill Park, N. Y. **George Wentworth** has been made superintendent of the underwear department.

Joseph P. Kimball has resigned as overseer of warping and preparation for Amoskeag Mills, Inc., Manchester, N. H.

Harold V. King, general manager of the Hill, Edwards, and York Divisions of Bates Mfg. Co., Lewiston, Me., has been appointed plant manager and general manager of the Bates Div. in addition to his other duties.

J. W. Landenberger, Jr., treasurer of J. W. Landerberger & Co., Philadelphia, Pa., was elected president to succeed **Franklin L. Landenberger**, who will continue as a member of the board.

William S. Manning has been named superintendent of the new Gayley plant of Deering, Milliken & Co., Inc., Marietta, S. C.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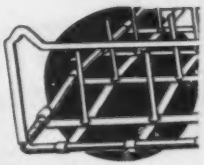

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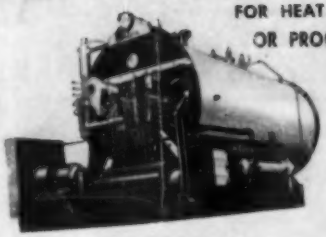

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News About MEN (Continued)

Joffre Meservier has been appointed second hand of No. 1 Middle Weave Room, Hill Div., Bates Mfg. Co., Lewiston, Me.

Ernest H. Miller has joined Burlington Mills Corp., New York, N. Y., as manager of the company's New York Dyeing and Finishing Div. He succeeds Justus Addis, who has been transferred to the firm's Industrial and Diversified Fabrics Div. as general sales manager.

James P. Mills has been appointed manager of product planning and control of Mohawk Carpet Mills, Inc., Amsterdam, N. Y.

A. C. Murphy was recently promoted to the position of manager of the examining department of the New York office of American Woolen Co. He succeeds **R. L. Hall, who** retired under the company's retirement plan.

George H. Murphy, president of Personal Products Corp., and **Wayne J. Holman, Jr.**, president of Chicopee Mills, Inc., have been named to the board of Johnson & Johnson, New Brunswick, N. J.

Dennis Nalette is overseer of carding at New England Knitting Co., Winsted, Conn., a position he has held for the past 12 years, and not **Andrew H. Healy**, as was previously reported in this column.

Charles A. Price has been named assistant manager of the ticking department of Avondale Mills, Sylacauga, Ala.

Benjamin Pulsifer has been promoted to superintendent of Nashua Textile Co., Inc., Nashua, N. H., succeeding **Stephen Bastow**, retired.

A. Reinhold has resigned as overseer of dyeing for Globe Mills of American Woolen Co., Inc., Utica, N. Y., to become associated with Paton Mfg. Co., Sherbrooke, Que.

A. H. Riddell has resigned as head designer at Arlington Mills of William Whitman Co., Inc., Lawrence, Mass., to become assistant to **Morris G. Einstein**, general manager, at the Bristol, R. I. plant of Collins & Aikman. **George S. Orr** will succeed Mr. Riddell as head designer at Arlington.

WALDO F. OPERER, formerly Eastern-district-sales manager of Belding Corticelli's Industrial Thread Div., has organized his own company, the Industrial Thread Corp., with headquarters in New York, N. Y.

T. C. Roche has been named vice president and general manager of Limestone Mfg. Co., Gaffney, S. C.

Leslie E. Schildein has been appointed director of personnel of The Kendall Co. in the South, and will maintain his office at the company's divisional headquarters in Charlotte, N. C. His personnel duties will extend to the Thrift Mill, Paw Creek, N. C., and plants in Newberry, Edgefield, Camden, and Pelzer, all in South Carolina.

Joseph A. Smith has resigned as personnel director of American Woolen Co., Lawrence, Mass.

T. Lynwood Smith, vice president of Adams-Millis Corp., High Point, N. C., and personnel director since 1946, has been transferred to the company's sales department, with headquarters at High Point. Succeeding him as personnel director is **J. W. Snotherly.**

A. C. Spivey has resigned as superintendent of Newton Knitting Mills, Newton, N. C., to organize Car-Tenn Textiles, Inc., Newport, Tenn., of which he will be president and general manager. **C. O. Ellis,** vice president and general manager of Burnsville Hosiery Mills, Burnsville, Tenn., will be vice president and secretary of the new hosiery finishing plant.

Horace D. Steadman has be-

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A chart showing fiber properties and manufacturing performance of the eight varieties of cotton that make up about 80% of all cotton grown in the U. S. This chart, listing information on these varieties for the first time side-by-side, can save mills money by permitting selection of the best fiber for the end product.

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Let's Knot—and Do it the Right Way (June, '46)
Ramie—an Imperial Report (Dec. '45)
Measured Motion Times the Job Faster (Oct., '49)
Efficiency and Flexibility Offered by Finishing Ranges (Oct., '47)
Performance Standards Should Govern Oil Purchases (June, '48)
Running Rayon on the Woolen System (Dec., '45, through March, '46)
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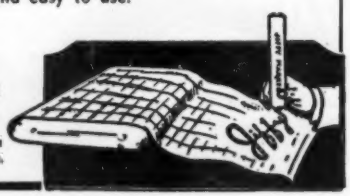

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News About MEN

(Continued)

come treasurer of Smitherman Cotton Mills, Troy, N. C. He succeeds **Fred L. Still.**

Robert B. Steere has resigned as vice president of Park Silk Co., Lebanon, Pa. Mr. Steere has not announced his future plans.

Milton M. Stuart has resigned as executive vice president of M. Lowenstein & Sons, Inc., New York, N. Y. Mr. Stuart has not announced his future plans.

Frederick Surr has resigned as superintendent of John Alden Woolen Mills, Inc., Worcester, Mass.

Frederick W. Thomas, vice president in charge of manufacturing of Clark Thread Co., Inc., Acworth, Ga., and J. & P. Coats, Inc., Pawtucket, R. I., is retiring for health reasons. Mr. Thomas, who has served for more than 20 years as vice president, will remain with the company in a technical advisory capacity. **Emerson M. Bullard,** assistant to Mr. Thompson for several years, will be in charge of the Clark Thread Co. Southern mills.

William B. Thomas has been named executive vice president and general manager of Brodnax Mills, Inc., Brodnax, Va. Mr. Thomas was formerly general manager of Mooresville Mills, Mooresville, N. C.

Charles L. Tidwell, who has been manager of Dunean Mills, Greenville, S. C., has been appointed assistant general manager of Dunean Mills and Watts Mills, Laurens, S. C., both units of J. P. Stevens & Co., Inc. **C. J. Pride** succeeds Mr. Tidwell as manager of Dunean Mills.

John Wells Todd has been promoted from general overseer of Weave Room No. 2 at Watts Mills, Laurens, S. C., to superintendent of weaving, slashing, and drawing-in. **Luther L. McCall** has been promoted from third-shift overseer to general overseer of Weave Room No. 2.

Harold R. Turner, assistant executive officer of Dunean Mills, Greenville, S. C., and Watts Mills, Laurens, S. C., has also been appointed assistant executive officer of

E. B. SHAW has been named general manager of the American Thread Company's New England Div., comprising mills at Willimantic, Conn., and Fall River and Holyoke, Mass. Mr. Shaw has been agent in charge of the Willimantic Mills for the past eight years and before that was superintendent of the company's Dalton Mills in Dalton, Ga.

Victor Monaghan Co., division of J. P. Stevens & Co., Inc. He will continue to maintain his offices at Dunean Mills.

Walter Wallenburg, formerly assistant maintenance superintendent of the power plant of Graniteville Co., Graniteville, S. C., has been appointed assistant chief engineer to succeed the late W. A. Parr.

Robert Welsh, superintendent of finishing operations at Wood Worsted Mills of American Woolen Co., Lawrence, Mass., since 1937, has been elevated to a new position. He is now supervisor of finishing in all American Woolen Co. woolen and worsted plants, with headquarters at 1 Mill St., Lawrence, Mass. His position as superintendent at Wood has been taken over by **Thomas O'Hara,** assistant superintendent of the same department for about a year.

Harold Wilson has been appointed assistant resident manager of Wood Worsted Mills of American Woolen Co., Lawrence, Mass.

Hubert C. Woodall, Jr., has been named superintendent of the Galax Weaving Plant of Burlington Mills Corp., Galax, Va.

Fred Woodward has become night carder at Albany Woolen Mills, Inc., Albany, N. Y.

OBITUARY

Rufus Franklin Bagwell, 69, for 16 years overseer of the slasher room of Grendel Mill, Greenwood, S. C.

Carleton E. Bauldry, 56, general manager of the Clark Thread Co. mill at Thomasville, Ga.; of a heart attack.

Earl Henderson Brown, 72, retired general manager and assistant treasurer of Carolina Mills, Inc., Dillon, S. C.

William Caplin, 65, president of Seamprufe, Inc., New York, N. Y.

John James Corrigan, 56, secretary of Slane Hosiery Mills, Inc., High Point, N. C.

William S. Dean, 44, vice president and part owner of Royston & Co., Inc., Philadelphia, Pa.

Benjamin B. Gossett, 67, leading Southern textile manufacturer for many years. Befor his mill interests were sold to Textron, Inc., he was president and treasurer of the Chadwick-Hoskins Mills of Charlotte, N. C., and the Gossett Mills of South Carolina.

Hugo Hemmerich, 63, vice president and superintendent of Berkshire Knitting Mills, Inc., Reading, Pa. He was former vice chairman of the board of the National Assn. of Hosiery Manufacturers.

Charles E. Hendrixson, 74, who retired in 1939 as secretary-treasurer of American Viscose Corp.; at Philadelphia, Pa.

James Henneberry, retired general manager of Merrimac Hat Corp., Amesbury, Mass.

Richard E. Jahr, 52, secretary-treasurer of Standard Chemical Products, Inc., Hoboken, N. J.

Herman Levy, 93, chairman of the board of Century Ribbon Mills, Inc., New York, N. Y.

F. Robbins Lowe, 52, vice president and Southern sales manager for Saco-Lowell Shops, Boston, Mass.; in Charlotte, N. C.

Charles M. McLeod, 67, vice president and chairman

JOHN E. HULL, 78, president of Victor Ring Traveler Co., Providence, R. I., died recently in Providence. He joined the company in 1899 as superintendent. He was made a vice president and general manager in 1913 and president in 1920.

of the executive committee of Iselin-Jefferson Co., Inc., New York, N. Y.

Lawrence MacRae, 73, retired textile executive; at Concord, N. C.

Armando Macaruso, 42, retired foreman for Paragon Worsted Co., Providence, R. I.

William D. Mahony, 86, former president of Faith Mills, Inc., Averill Park, N. Y.

George Maynard, 48, foreman for Beacon Piece Dyeing & Finishing Co., Inc., Beacon, N. Y.

Harry E. Morton, 64, manager of the air-handling engineering department, Sturtevant Div., Westinghouse Electric Corp., Hyde Park, Mass.

Howard W. Pound, 55, vice president and manager of Air Filter Sales Div., American Air Filter Co., Inc., Louisville, Ky.

Benjamin F. Proud, 67, retired general manager, secretary, and treasurer of New Bedford Rayon Co., New Bedford, Mass.

Nicholas Reynolds, 50, formerly overseer of Warwick Mills, Inc., West Warwick, R. I.

Albert G. Willis, an official of Willis Hosiery Mill, Inc., Concord, N. C.

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PHILADELPHIA, PA. — Mr. Wm. S. Montgomery, 3701 N. Broad St.
PROVIDENCE, R. I. — Mr. L. T. Howick, 527 Industrial Trust Bldg.
CHICAGO, ILLINOIS — Wood & Hutchinson, 222 W. Adams St.
NEW YORK, N. Y. — Mr. John Cowan; Mr. Phelps Enslee, Empire State Bldg.
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One way is to feed more pig iron into the furnaces. But . . .

That will require *more* supplies of ore, limestone, coal, etc.*—to say nothing of more new ore boats and rail cars to transport the additional supplies.

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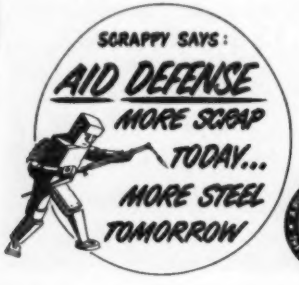
Your business *must* have available scrap—in *some* form. That scrap is *needed* to keep the furnaces going in the steel mills . . . to keep our fighting forces and our allies well armed . . . to sustain our civilian life at home.

Think how many ways *you* use iron and steel. Think what would happen if it became extremely scarce. Put your iron and steel scrap to good use—now—by selling it to your local scrap dealer.

Don't delay—the emergency is becoming more severe every day.

*For every ton of scrap fed into the furnaces, we save approximately 2 tons of iron ore, 1 ton of coal, nearly ½ ton of limestone and many other critical materials. Also, scrap helps make steel faster, shortens the refining process.



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This advertisement is a contribution, in the national interest, by

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330 WEST 42nd STREET NEW YORK 18, N.Y

SEARCHLIGHT SECTION

EMPLOYMENT • BUSINESS • OPPORTUNITIES • EQUIPMENT—USED or RESALE

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NEW ADVERTISEMENTS received by December 13th, at the New York Office, 330 W. 42nd St., N. Y. 18, will appear in the January issue subject to limitation of space available.

MEN WANTED
POSITIONS OPEN

We can place: SUPERINTENDENT nar. fab. mill; supt. slide-fastener cord plant; worsted cloth mill supt. with southern experience; hosiery supt. (foreign); tricot mill managers, supts., overseers and fixers; general sales manager hosiery mill; worsted designer for styling position in New York City; worsted dress goods designer; asst. industrial relations-employment manager.

OVERSEERS FOR FOLLOWING DEPTS: underwear cutting; dyeing and finishing synthetic yarn piece goods; woolen carding, carpet yarns; latch and spring needle knitting; dyeing narrow fabrics; ribbon dyeing; sewing room; cotton jig dyeing; worsted yarn twisting; worsted drawing, 2nd shift; worsted cap spinning, 1st or 2nd shift; worsted skein dyeing.

SECOND HANDS FOR FOLLOWING DEPTS: woolen carding; woolen dyeing also to assist in laboratory; cotton carding, 3rd shift (South); drawing and spinning.

CHEMISTS, chemical engineers and laboratory men, $4,000-$9,000; mechanical, electrical and plant engineers, master mechanics salary range $3,000 to $9,000; textile school graduates with at least two years' mill experience to learn manufacturing, also work in laboratory and dye house.

SALESMEN for machinery, chemicals, soaps, penetrants, softeners, threads, etc.; all around machinist and repairman experienced worsted yarn machinery; loom fixers; sewing machine mechanic; velvet loom fixer; woolen card fixer; expert fixer S.S. looms.

LIST YOUR CONFIDENTIAL APPLICATION WITH US to keep informed of attractive positions open in the textile mills.

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington St. Boston, Mass.

Applications are invited for the following post so as to reach the Silk & Art Silk Mills' Research Association, Podar Chambers, Parsee Bazar Street, Fort, Bombay, before 15 the January 1952. Selected candidate will be entitled to such dearness allowances and other benefits as may be sanctioned by the Association from time to time. Special terms and higher starting salary may be offered to candidate with exceptional qualifications:—

Director of Research:

Grade Rs. 2000—100—300 (per month)

Qualifications: High academic qualifications with a minimum of 10 years experience as a leader of a research team actively engaged on problems connected with one or more of the following:

Structure and properties of natural and artificial silk fibres, spinning and weaving of rayon, nylon or other similar synthetic fibres; manufacture, processing, sizing, dyeing, bleaching or finishing of silk or art silk fabrics and their properties. Outstanding personal record of research essential.

WANTED

MANAGER capable of operating small Duck Waterproofing Plant with maximum daily production of 25,000 yds.

Must have had actual experience in a Plant of this kind. Basic knowledge of chemistry desirable.

Salary commensurate with ability and bonus on production.

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430 Notre Dame St. New Orleans 6, La.
Phone: RAymond 1321

REPLIES (Box No.): Address to office nearest you
NEW YORK: 330 W. 42nd St. (36)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

POSITIONS VACANT

CARDER & COMBER—to take charge of a small Noble Combing Plant, Middle Atlantic location; preferably with experience on low wools and hair. Must be familiar with all requirements and have shown performance to maintain quality and production standards. State experience and salary to P-2456, Textile World.

OPENING FOR laboratory man who can match shades, test dyestuffs, etc., one who has had some experience preferred — excellent opportunity. P-2183, Textile World.

OVERSEER OR Second-hand on carding, in textile operation producing specialized fabrics. Want man skillful in care of cards, garnetts, and pickers. Location, Little Rock, Arkansas. Furnish work history and wages in reply. Address P-2399, Textile World.

SUPERINTENDENT, EXPERIENCED on Narrow Fabric Jacquard Looms, to take charge of woven label Mill. Give full details. P-2507, Textile World.

WAGE COORDINATOR for multi-plant employer. Position requires heavy experience in application of Incentive Methods and Job Evaluation procedures. College degree desirable. P-2354, Textile World.

WANTED—ASSISTANT Dyer for yarn dyehouse handling directs, developed and vat colors by the package method—one who can match colors and handle help. Excellent future for the right man. P-2179, Textile World.

WANTED: EXPERIENCED Raschel Machine Fixer. Large company. Right salary to right man. Send resume of experience and salary requirements. P-2292, Textile World.

SELLING OPPORTUNITY OFFERED

WANTED: SALESMAN, Medium sized, well financed chemical company, presently specializing in Synthetic Detergents and Textile Finishes, desires the services of a salesman or go-getter to substantially expand sales to the same or other fields. A most attractive proposition is available. Response in full detail will be kept confidential. SW-2531, Textile World.

POSITIONS WANTED

KNITTING ROOM Mechanic and Supervisor most types Circular Latch Needle, Rib Body and Spring Needle machines. Original designs, advanced production methods. 30 years experience. Available Jan. 1st, 1952. Will travel. PW-2517, Textile World.

NIGHT OVERSEER
of dyeing or finishing
or—ass't. supt., etc.

There are excellent full-time opportunities in the field of technical sales.

IF: You want a high income
You want security
You are a college graduate
You have five years experience in textile wet processing
You are under 42.

Reply to P-2340, Textile World
330 W. 42 St., New York 18, N. Y.

All replies held in strict confidence.

WANTED
Napping Supervisor

Must be experienced on napping, shearing, sanding, and sueding of synthetic blends. Location in the South with large, well established textile firm. Give full details of work experience.

P-2108, Textile World
330 W. 42 St., New York 18, N. Y.

POSITIONS WANTED

PLANT SUPERINTENDENT have 30 years experience on Rayon, Nylon, Silk Acetate, on Draper Loom—C and K Loom. Will be open for position first of the year. PW-1868, Textile World.

SELLING OPPORTUNITY WANTED

PROMOTIONALLY MINDED Salesman NYC, wishes represent Southern Mill making textile items for national chains. Commission. References. RA-2516, Textile World.

PATENTS

CONSULT: Z. H. POLACHEK,
Reg. Patent Attorney, 1234 Broadway, New York 1, N. Y.

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TEXTILE PLANT WANTED: We are now manufacturing over $20,000,000 in various lines and wish to expand by acquisition of assets or stock of one or more industrial companies. In our negotiations the seller's problems and wishes will receive full consideration. Present personnel will normally be retained.

Address all replies
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233 Broadway, N. Y. 7. N. Y. BA 7-1818

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can be found each month in the
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1—72" Parks & Woolson Decatizer, Pump & Motor.
1—Butterworth Clip Tenter 40' x 72", Stainless Clips, Reeves & Motor.
1—Hinnekens, 60" Variable Speed Examining & Tubing Machine.
1—Elliott & Hall 54" and 60" Flat Folders.
2—W.J. Tenter Frames, 30' x 54"
1—W.J. Tenter Frames, 30' x 96"
1—3 roll silk or rayon Calender, M. D.
1—42" Self Balancing Extractor, M. D.
2—150 gal. Jacketed Kettles with agitators.
1—Set of 21-72" x 23" Dry Cans Horizontally.
1—72" Hydraulic Padder, M. D.
1—Set of 9—20" x 60" Heavy Steel Dry Cans.
1—Set of 7 copper cans, horizontal, Reeves & motor.
1—50" V. V. Button Breaker.
1—64" Van Vlaanderen motor driven Tuber.
1—54" King & Gerber embossing calender, M. D.
2—60" motor driven Beamers.
4—Hermas measuring & inspecting machines, tube to tube.
1—60" Measuring, Inspecting & Tubing Machine, tube to tube, new, variable speed, forward, neutral & reverse.
30-60 gallon copper steam jacketed Kettles.
1—Hinneken's Boil-off Machine.
1—Sterling 7½ H. P. Vari-drive.
1—Reeves 7½ H. P. Vari-drive.
About 5,000 S. S. high speeed V. V. Clips.
Agitators of various sizes.
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New & Used Electric Hoists.

One 66"—5 Drum Johnson Slasher, Reeves Drive & Motor. In excellent condition
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New Copper Rollers 16" x 60" wide, W Bore

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523-525 E. 18th ST. — PATERSON 4, N. J.

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20 Atwood Redraws — Gate Tensions — Accommodates 5" Head.
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30M Spinner Spools—4½" T x 3¾" H.
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1500 Bak. Sizing Tubes 7" Long v 6⅛" Dia.
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60M 5B Spin. Spools—4⅜" T. x 2 7/16" H.
2M Metal Bobbin & Cone Trays.
50M Fibre Hd. Spools—4 9/16" T. x 3" H.
3M S.S. Takeups—3¼" T. x 3¼" H.-H.G.
5M S.S. Takeups—3⅜" T. x 3¼" H.
6M Spinner Spools All Bakelite—7" Trav. x 3⅜" HD.-SS Ferrule (For Nylon).

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1—"Parkhurst" 48" Burr Picker with Feed
1—Sargent 36" Duplex Burr Picker
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1—Terrell Mod. E Bobbin Stripper

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1—Whitin Quiller 3½" Gauge (long chain)
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69" W x 88" F to B x 59" D
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Would include Crank Lever Stand, and Side Pump Lever
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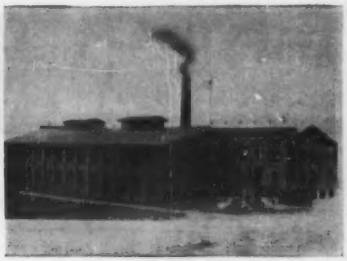

Hudson, New York Warehouse

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25—Whitin COTTON CARDS 45", 27" Doffers, 12" Coilers.
48—DELIVERIES WHITIN DRAWING Metallic Rolls, 12" Coilers.
3—Woonsocket SLUBBERS 5½x11, B.B. TOP ROLLS, 72 Sp. ea.
8—Woonsocket INTERMEDIATES 9x4½, B.B. Top Rolls, 124 Sp. ea.
2—Woonsocket INTERMEDIATES 8x4, B.B. Top Rolls, 160 Sp. ea.
16 Woonsocket SPEEDERS 7x3½, B.B. Top Rolls, 176-184 Sp. un'tn.
24—Whitin SPINNING FRAMES 3" Gauge, Auto. Separators, Adj. Saddles, 204-216 and 240 Spindle Units.
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1—Toledo LAP SCALE 100-lbs., ¼ lb. reading.
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1—S&L TWISTER Wet 200 Spindles, 3½" Gauge.
1—Draper BANDING Machine automatic.
1—Terrell BOBBIN STRIPPER for Roving Bobbins.
2—Abbott FULLY AUTOMATIC Model 65 CONE WINDERS 100 Sp. each.
2—Hunter GARNETTS 3 cyl., units 30x80 with FEEDERS.

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48—Draper K 47", 25 Har. Dobby, Mtrs.
32—Draper XK 47", 16 Har. Dobby, Mtrs.
16—C&K C4 48" B.S. 4x1 auto 4 Har. Mtrs.
92—C&K S5 54" B.S. 2x1 auto 20 Har. Mtrs.
26—C&K S6 36" B.S. 2x1 auto 20 Har. Mtrs.
24—C&K W2 64" B.S. 4x1 auto 20 Har. Mtrs.
24—C&K W3 80" B.S. 4x1 auto 25 Har. Mtrs.
24—C&K W3 94" B.S. 4x1 auto 25 Har. Mtrs.
72—C&K VERYBEST 92" R.S. 4x1 auto 25 Har. Mtrs.
12—C&K W3 92" R.S. 4x1 auto 25 Har. Mtrs.
18—C&K 92" R.S. 4x1 auto 25 Har. Mtrs.
6—Kenyon 1944 Model RAW STOCK DYE TUBS, Percolator Type.
1—Worthington 1947 Model, AIR COMPRESSOR 7x7 Mtrs.
1—D. Gessner 1947 Model, SEMI-DECATUR 72"x36", Pump, Air-Guiders, Motors, Blanket, etc.

LIQUIDATING RARITAN MILLS, RARITAN, N. J.

Partial List

18—Whitin 1947 Model, SCOTCH INTERMEDIATE 48" CARD FEEDS, 11 Conveyors.
18—Sturtevant 1946 Model, WASTE END BLOWERS, Mtrs. with Piping.
5—J&B 1946 Model, MULES 360 Sp. ea., 2⅛" Gauge, MTRZ.
8—J&B 1942/5 Model, GP MULES 312-336 Sp. ea., 2½" Gauge, MTRZ.
1—D&F 1944 Model, IRON FEARNAUGHT PICKER, 48" with OILER, 4 SPRAY NOZZLE, BLOWER & Motors.
1—Worthington 1944 Model VACUUM PUMP, 12x7 Mtrs.
48—NEW IONOTRON STATIC ELIMINATORS.
1—D. Gessner 1944 Model, SCUTCHER, 78", Reeves & Mtr.
1—Chandler 1946 Model, SWATCH CUTTER 32" Blade.
1—Louden 1946/6 Model, MONORAIL & HOIST SYSTEM.
1—Richards-Wilcox 1944 Model, CONVEYOR SYSTEM.
1—U.S.-Hoffman, 1947 Model, VACUUM CLEANING SYSTEM.
1—S&L 1947 Model, SOAPER, 2 pair S.S. Rolls.
1—S&L 1947 Model, Fleetline YARN STEAMER, 4 truck unit.
1—NEW S&L CONTINUOUS CLOTH ROPE WASHER, 4 Wash Tanks 12 string units, 6 Rinse tanks, motorized squeeze rolls, etc.

Also complete machinery and equipment from RAW STOCK DYEING thru CLOTH FINISHING. Including Supplies, Motors etc.

WAREHOUSE STOCK

1—STEAM BRUSH 2 roll 66".
2—CONDENSERS, Return Air Upright Type.
4—CONDENSERS, Ceiling Type, Self Contained Fan Units.
1—TAPE CONDENSER 48" Single Rubb 112 ends.
2—TAPE CONDENSERS 60" Single Rubb 96 ends.
1—REEVES DRIVE #2—4:1 Ratio.
3—DOUBLING & WINDING Units 60"—66" —80".
1—EXTRACTOR 48" S.S. Basket, V-Belt Drive.
1—EXTRACTOR 50" Monel Basket, V-Belt Drive.
1—FOLDER 78" adj. 18" to 42" folds.
2—MIXING KETTLES approx. 60 gals. each.
1—MIXING KETTLE 3 beaters, 120 qt.
1—MANGLE 2 roll 50" rubber & Brass rolls.
1—NAPPER Knit-Goods 18 roll 66".
1—NAPPER S.A. 14 roll 72".
1—NAPPER D.A. 18 roll 66".
1—NAPPER D.A. 20 roll 80".
1—NAPPER D.A. 24 roll 72".
1—NAPPER D.A. 24 roll 96".
2—POWER PERCHES 92" with Mending Tables.
1—ROTARY STEAM PRESS 86".
1—PICKER Mixing 6 bar 40".
3—QUETCHES 2 roll 50"-65" and 3 roll 50".
1—Portable Rotary Elec. SEWING MACHINE, Merrow 60 D2B Head, Mtrs.
1—SHEAR 4 Blade automatic 60" B.B.
2—SHEARS 2 Blade Units 66½".
2—SHEARS Model A 2 Blade units 66½".
1—SHEARING, BRUSHING & STEAMING Range 66½".
5—SPINNING FRAMES, Wool 180 Sp. ea. 4" Gauge.
1—WINDER COMB. Tubes & Cones, 60 Spindles.
1—SHEAR Hi-SPEED B.B. 66½".

MISCELLANEOUS

3—WOOL IRON CARDS 60x60 with Tape Condensers.
16—NOBLE COMBS 18 spools, 72 ends.
1—CALENDER Friction 3 roll 50".
1—CALENDER Silk Type 3 roll 80".
1—GARNETT 3 cyl. 30x80 with Feeder.
14—C&K ¾ Axminster Looms.
1—CAN DRYER 32 Cans 103" Face.
1—LOOP DRYER Revolving Stick 84".
1—RAW STOCK DRYER 4 section 72".
1—DYE KETTLE Enclosed S.S. 12 String.
1—PACKAGE DYEING Unit C.L. 125 lbs.
1—FULLING MILL Double Compartment Rubber rolls.
1—PADDER 2 roll 50" extra set New Rolls.
1—Print Machine 3 color 60".
1—SHREDDER 1947 Model 60".
1—OPENING PICKER 60" S.S. Flns.
2—SPINNING FRAMES Model E 3" Ring.
1—SCOURING Unit RAW STOCK 3 Bowl with DRYER.
1—SLASHER HOT-AIR takes Beam 84"x30" Flanges.
1—TENTER FRAME CLAMP 40"x54".

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Bronx 51, New York
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SAVE TIME ON DELIVERIES.....
.....AND SAVE MONEY TOO!

1—Pair Sargent 60" Pneumatic Squeeze Rollers, with feed and take-off, aprons and motor.
2—Laboratory Printers, one equipped with two cans.
1—Completely Stainless Steel Roll-off Machine, 65". (like new).
1—Windsor & Jerauld 80' Tenter Frame, with 8-Fan Housing.
1—Proctor & Schwartz Hurricane type Pin Tenter Dryer, automatic guides, vari-drive. (can be seen in operation).
1—National 84" Revolving Stick Loop Dryer, fans & motors.
1—Nash #5 Pump, with 220/440 volt motor.
1—Stack 10 Tinned Steel Cans, 50", syphons, Johnson Joints.
2—Smith-Drum Paddle Type Dyers. (one machine New.)
1—Parks & Woolson 86" Doubler and Winder.
4—Stainless Steel Lined Dye Becks, 8', 6', 4'.
1—Textile Finishing Co. 3-roll 72" Hydraulic Calendar.

WE BUY FROM A SINGLE ITEM TO A COMPLETE PLANT

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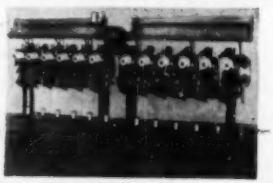
Season's Greetings

To our many friends all over the country our wishes for a happy and prosperous New Year

GAINES TEXTILE MACHINERY CO. INC.
141-45 WEST 17TH STREET NEW YORK 11, N. Y.
Dealers in rebuilt and guaranteed winding machinery

REBUILT WINDERS

We thoroughly rebuild all types of yarn winding equipment—Universal #5, #6, #10, #50, #60 and #90; Foster Model #12, #30 and #101, Lazenby, Oswald Lever, Sipp, Atwood, George Payne.



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EXCELLENT TEXTILE FINISHING MACHINERY

1—Warthington Duplex Steam Pump 7½ x 4½ x 10". Weight 1500 Lbs.
1—Warthington Duplex Steam Pump 7½ x 5 x 6". Weight 1200 Lbs.
3—39" diam. 50" wide between rings Copper Cans.
3—60" Steel Rolls covered with Wool Felt.
2—60" Brass Rolls ¾" thick—14" diam.
34—C.I. Can Gears.
1—70" wide S.S. Box for Jigs.
7—60" wide S.S. Boxes for Jigs.
1—132 wide S.S. Suction slot.
1—Simplex Tubing & Doubling Machine.
1—5 Can 52" Narrow Fabric Finishing Mchs. BB Drive—52" Quetch.
1—7 Can 40½" Copper Dry Cans Complete with Drive.

Wire—Write—Phone

TEXTILE FINISHERS EQUIPMENT
144 WEST RIVER ST. PROVIDENCE R. I.

EL. UNION 1-0050

Pointers for Supervisors

(Continued from page 172)

no reason in March to note the fact that a machine had broken down on a particular day when everyone expected it to be fixed immediately.

Probably no one will get every fact needed, but our supervisors have a way of recording facts that have proved invaluable both for making their own decisions and for future discussions of the grievances. Each man carries a small notebook. When he talks to a worker about his work, he notes in his book that he has done so. When the worker has disobeyed a rule and is spoken to, that fact goes into the book. When he gives a worker some unusual directions, that fact is recorded. The foreman has not become an earthly Saint Peter keeping an account of each man's total behavior, but he does record many of his contacts with his employees. When any disciplinary action must be taken, there can be no question about dates or action. Such facts enable a foreman to deal fairly with each worker.

When grievances can be appealed, it is particularly important for the higher authority to have facts before him to be used in making the final decision and in preparing cases for arbitration. The workers, for example, claim they have lost earnings because of job changes. They show a few check stubs to prove the point. Payroll records are available to foremen, and in a surprising number of cases those records show that there really has been no loss. Confronted with the records, the worker and the union, if any, are satisfied. The good foreman will dig out those facts. The poor supervisor will let the personnel director handle the matter, thus making the worker think he can't get a fair hearing from his boss, the man who, most of all, should be fair with him. It's really not a matter of fairness but of finding facts.

I receive reports of all grievances that come to me for settlement or arbitration. Sometimes I get all the facts, but too often the reports from supervisors are simply reports about arguments. Recently in a case involving poor production the only report submitted by the supervisor concerned an argument he and the shop steward had had about getting a window fixed. The supervisor had the facts in his office and his case was good, but I could not tell from the report even what the dispute was about.

Every supervisor has made this same mistake some time in his career, be-

(Continued on page 286)

MILLER MACHINERY CO.
66 RAILROAD AVE. PATERSON, N. J.
Tel. Sh 2-5457-8

JOHNSON 66"
7-DRUM SLASHER

Warpers • Winders • Quillers
Looms

DYE SPRINGS

MANUFACTURED

EXPERTLY RE-WOUND
AT A REAL SAVING

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USED CONDITION

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KNITTING and TEXTILE MACHINERY
BOUGHT and SOLD
PLANT LIQUIDATIONS and APPRAISALS

FOR SALE

13—H. & B. 48" CARDS, 12" Coilers.
3—WHITIN Full Roller Cards, 45" & 48", with Roll Grinders.
4—Deliveries WHITIN 32-COIL DRAWING with 100—14" x 36" Cans, 1950.
1—COCKER 8 Can, 82" SLASHER, practically new.
300—Draper 40" Model E Looms.
1—B—C, Model LC Tying-in Machine.

J. H. WINDLE & COMPANY
H. C. Motley, *President*
Telephone GAspee 1-6464
231 South Main St. Providence 3, R. I.

For Sale - Reasonable

One Luther thread dresser three brush complete with take up frame and 98 bobbin creel excellent condition. One E and B 48 spindle skein to bobbin winder excellent condition. Four Universal #50 Winders clutch drive 6" traverse 5"57" taper coners, complete with yardage meters and emulsion troughs. All in very good condition.

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520 N. Michigan Ave., Chicago 11, Ill.

. . WE OWN AND OFFER FOR SALE . .

45-AUTOMATIC, S-4

4x1, 54" REEDSPACE, SHUTTLE CHANGE

RECONDITIONED

roller bearing, shock absorbers, 20 hook double index dobbies, removable cloth rollers, temples, pick clocks, ½ HP, 220 volt, 60 cycle, 3 phase, 1750 RPM Motors, electric warp stop motions, beams.

Can be inspected at our plant.

SPECIALISTS IN REBUILDING & RECONDITIONING LOOMS

COMPLETE PLANTS AND REAL ESTATE BOUGHT, LIQUIDATED AND APPRAISED

Paterson Textile Machinery Exchange INC

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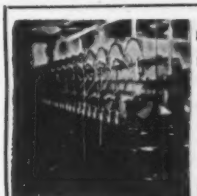

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53—23" dia. x 105" face copper cans bucket type frames and bearings.
30—23" dia. x 88" tinned iron dry cans gear driven bucket type frames and bearings.
8—23" dia. x 80" face copper dry cans bucket or siphon type ball bearings or friction bearings.
8—23" dia. x 40" face copper dry cans bucket or siphon type gear or chain driven.
3—5' x 38" face copper slashers bucket type.
Dry can machines built to your specifications.

Write • phone • wire

EASTERN TEXTILE CO.
New and Used Finishing Machinery Specializing in Dry Can Machinery

Tel. 33228

296 Lincoln Ave. Fall River, Mass.

152—C & K, 2 x 1, S-S automatic shuttle changing motorized looms, weave 50" and 52" cloth. Complete.
112—C & K, 2 x 1, S-S automatic bobbin changing motorized looms, weave 52" cloth. Complete.
24—C & K, S-S 2 x 1, 58" motorized automatic bobbin changing looms. New.
32—C & K, 2 x 1, automatic bobbin changing looms, weave 50" cloth complete. Motorized.
22—C & K, 4 x 4, 68" Intermediate gem head motorized looms complete weave 64" cloth.
18—C & K, 4 x 4, 72" intermediate gem head motorized looms weave 68" cloth.
76—Atwood (Monarch type) 184 spindle double deck spinners, motorized.
70—Draper Model C automatic shuttle changing looms, motorized, weave 46" cloth.
3—Johnson 5 can 80" slasher complete, silk system.
2—Van Vlaanderen 5 can 60" Slashers, silk system, complete.
2—Cocker 60" 5 can slashers, cotton system, complete.
1—Johnson 60" 5 can Slasher complete, cotton system.
1—2 cylinder 20" x 60" Smith & Furbish Garnett machine, equipped with speed reducer, excellent condition.
Complete line of Universal #90 Quill Winders, #50 Cone Winders.
Large assortment, stainless steel, steam jacketed kettles, 40, 60, 80 and 100 gallon capacity complete with lids, stands, safety and drain valves.
New looms parts and supplies, harness frames, heddles, bobbins, etc.

Advise your inquiries and you will receive a prompt response.

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Tel: 4-9434

LIQUIDATING—For Immediate Removal

1—W. & J. 40' x 65" Tenter Frame, s.s. clips, motor and reeves.
4—66" s.s. Dye Jiggs, enclosed gears, individual motors.
1—V.V. Palmer Quatch Unit, complete, for 60" width goods.
1—R. B. & F. 2 color, 45" Print Machine, with 12-50" x 23" copper cans.

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TEXTILE AUXILIARIES

SPECIALIZING IN RECONDITIONED FINISHING MACHINERY
TOP VALUES FOR DECEMBER

Embossing and plain Calenders from 40" to 72" wide
Beuthners from 42" to 78"
2 and 3 roll Dye Pads up to 90" wide
Flat Folders and Double & Rolling Machines, all widths
Also, Examining Machinery and Beamers
1—2 color Sample Printing Machine, 24" wide
1—2 color Rice, Barton & Fales Printing Machine, 42" wide, rubber covered cylinder
2—50" latest type Van Vlaanderen tensionless stainless steel Dye Jiggs, also others up to 80" wide
1—20' Pin Tenter, 60" wide, with Infra Red Heat, also Standard Tenters up to 90" long, all widths
Also, Dry Cans, all widths, any amount, any length

Ask for Our Detailed List. Foreign Inquiries Invited

PROVIDENCE, R. I.

FOR SALE—NEW

108" Diameter by 312" Long Horizontal Storage Water Heater with steel shell ¾" thick and bumped heads ⅞" thick, welded construction. Storage capacity 11,900 gallons. Heating capacity 6000 gals. of water per hour from 40° to 180° F. with steam at 100# pressure.

Total weight approximately 16 ton.

Never been in use. Available for immediate shipment.

FS-2012, Textile World
330 W. 42 St., New York 18, N. Y.

FOR SALE

CIDEGA
KNITTING LOOM

One machine, Type C, 54" complete with accessories, Minimum wear, used only for test. For quick sale to best offer around $1200-$1300.

FS-2311, Textile World
330 W. 42 St., New York 18, N. Y.

(Continued from page 284)

cause fact finding is time consuming and requires more effort than simple argument without facts. Yet the best supervisors will use facts rather than absolute rules in handling most grievances and will collect all the facts to pass on to those who may have to hear the grievances later or present an arbitration case for the company.

Find the facts. Record the facts. Use the facts.

Textile Chemical Outlook

(Continued from page 105)

once, depending on the prior use made of the material.

We don't have the sulfur to produce all the acid that is being requested today.

As far as defense is concerned, or a real war, or whatever we get into, we have no problems on sulfur and sulfuric acid. We have plenty for those purposes. But the civilian products will suffer.

Superphosphates

NPA—Superphosphate can be made from nitric acid, but the economics are not very good today. To use nitric acid you have to oxidize ammonia in equipment made of stainless steel, and that is a little difficult to get. We don't have the capacity for that, and our economy is not comparable with France, for example, where some of those things seem to be working out pretty well. We pay labor more money and it costs more to build plants here. Nothing alarming in this situation, but there will be a period where you might not get everything you want.

Benzene

NPA—So far as our availability at the moment is concerned, which is something everyone seems to be interested in, our available from coke-oven sources, which has been our basic supply up to now, with the exception of some imports during World War II, will reach an all-time high this year, when we will have almost 180,000,000 gal. On top of that, to augment our domestic supply, we have a new type of production in the field—production of benzene from petroleum sources. This year we will get approximately 25,000,000 gallons from that source. By the end of the year, our productive capacity from that source will be at the annual rate of about 40,000,000 gal. It is expected by mid-1952 we will produce about 60,000,000 and by the end of 1952 about 90,000,000.

The big thing that has kept us from really being in trouble this year on benzene has been the imports. At the moment between 20 and 25% of our

(Continued on page 288)

30 STANDARD 15'8" FLETCHER LOOMS

¾ H. P., direct gear motor drive, any type or space batten desired with looms.

We are interested in buying narrow fabric equipment such as looms, beams, parts, etc.

1 Johnson 7 DRUM 52" **SLASHER** MOTORIZED EXCELLENT CONDITION

Silk system, Brown instrument panels. Machines set up for narrow fabric operation, but can be converted to broad goods.

100 C&K — 52"-S-3 AUTOMATIC LOOMS

Large shuttle boxes, 52" looms, 2 x 1, 20 harness, 23" & 24" flange beams, Payne let-offs, individually motorized.

50 C&K — 4x4 — 56" MOTORIZED LOOMS

50 UNIVERSAL #50 CONERS

Gear gain, motorized, anti-wear tensions, 3-30 Tapir cones, excellent condition.

1 ATWOOD — 8 Fly - Motorized REELING MACHINE

10 Fletcher and Scranton REELING MACHINES

Automatic stops—8, 10, 12 Flys—motorized—yardage clocks.

6 LARGE PACKAGE **5 - B ATWOOD DOUBLERS**

12 oz. package—84 spindles, 1938 model, 6" spacing.

6 U.S. TEXTILE ACME D. DECK **TWISTERS** 2 MOTORS EXCELLENT CONDITION

1000 TRICOT BEAMS **50,000** LIKE NEW **FIBRE SPOOLS**

13¼ head—13" traverse—2¾" bore—9/16" & ¼" keyway. 3" head—3½" traverse—1½" barrel.

PHONE 3-7497 — **Wm. Rabinowitz & Sons** — PHONE 3-7498

214-222 HAMILTON STREET · ALLENTOWN, PA.

MACHINERY FOR SALE

10 **Intersetting Boxes**—7 Prince-Smith, 3 Lowell 2 spindle 14 x 9; ⅝" pitch; 13 per inch fallers, 22¾" overall; 5" retower; 34 fallers to box; 3⅛" Top front roller; 2" Bottom front roller; 5" back roll.

1 **Prince Smith Intersetting Box**—24 ball creel. Same specifications as above except 4 spindle 14 x 9; 68 fallers to box.

7 **Prince Smith & Stoltz Draw Boxes** (new 1948) 12 spindles 14 x 8—overhead creel; 4" front rollers, 5" face; 3¼" back rollers, 6" face; 11¼" pitch; spindle drive pulley—4⅝"; whorl 6⅛".

6 **Prince Smith & Stoltz Draw Boxes**—10 spindle 14 x 8—overhead creel; 4" front rollers, 5" face; 2½" back rollers, 6" face; 12¼" pitch; spindle drive pulley—4⅝"; whorl 6⅛".

1 **Prince Smith Intermediate Draw Box**—28 spindle—12 x 6 overhead creel; 4" front roll, 2¼" face; 2½" back roll, 2¼" face; 5" pitch.

1 **Prince Smith Intermediate Draw Box**—32 spindle—12 x 6 overhead creel; 4" front roll, 2¼" face; 2½" back roll, 2¼" face, 5" pitch.

1 **Prince Smith Intermediate Draw Box** — 36 spindles 12 x 6—overhead creel; 4" front rollers, 2¼" face; 2½" back rollers, 2¼" face; 5" pitch.

3 **Lowell Intermediate Draw Boxes**—24 spindles 12 x 6—overhead creel; 4" front rollers, 2" face; 2½" back rollers, 2¼" face; 5" pitch.

4 **Lowell Roving Frames**—96 spindle—8 x 4; 5½" pitch, 4" front roller, 2" back roller.

1 **Sargent Minion Dryer**—Mesh Apron type 6' wide, 18' long, new fin type heating coils, all individually motor driven, rebuilt by Sargent in 1945.

Spools	Quantity	Condition
8" x 14	1979	Good
8 x 14	38	Fair
8 x 14	119	New
9 x 14	1317	Good
9 x 14	48	Fair

NATIONAL WORSTED MILLS INC.

P. O. Box 666, Jamestown, New York

A&M BLANK CO., INC. OFFERS FOR

IMMEDIATE DELIVERY

1—V. V. Palmer Quetch Unit 64" with Compensator and Blanket.
1—8-Fan National Loop Dryer, revolving Sticks $4500.00
1—64" x 40' Tenter Frame, S. S. Clips
1—72" x 70' 5-tier Pin Dryer, 10 passes automatic opener $4500.00
1—60" Floating Knife Coater $350.00
1—50" Single Color Print Machine $750.00
1—50" 2-Roll Morrison Padder $375.00
1—50" Morrison Button Breaker, Ball Bearing $400.00
1—Set 16 Copper Dry Cans 80" $1200.00
1—Set 6 Copper Dry Cans, 50" x 30" dia.
4—Dinsmore Bicycle Sewing Machines $50.00 each
1—Giant Mixer $200.00
1—42" Hermas Inspection & Measuring Machine $200.00
Reeves Transmissions #2—$150.00 #3—$200.00 #4—$250.00

Remember the full name—for full value—

A&M BLANK CO., INC.

49 STATE STREET — *Sherwood 2-1367*

PATERSON, N. J. — *Lambert 3-9523*

FOR SALE

2—Barber-Colman "LS" Knot Tyers
1—Sargent 18 spindle Baller
2—Whitin 30" Card Feeders
32—Whitin 40" Cotton Cards
1—Textile 90' x 50" Swing Tenter
1—Curtis & Marble Vacuum Extractor
1—Textile 50" 3 roll Calender
1—Allen Kier Heater and Pump

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BIALEK'S BEST BUYS

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50" DRAPER "XD" DOBBY, 1949-1950
WHITIN AUTO. QUILLERS, 1949-1950
B. C. KNOTTER, "ONE BITE," WITH MOTOR, 56", 1950
58" HERMAS SHEARER, 1950
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SIPP DH WINDERS
1950—SKEIN TO CONES—FOR HI-SPEED WARPING-SILK AND YARN-DYED

SIPP 84" HI-SPEED WARPER WITH SIPP 840-END MAGAZINE CONE CREEL

S-3 C & K, 56", 2 x 1 AUTO. SHUTTLE CHANGE

S-4 C & K, 54", 56", 4 x 1 AUTO. SHUTTLE CHANGE

SLASHERS—52", 60", SILK AND COTTON SYSTEM

64" C & K, 4 x 4, DOBBY, MULTIPLIER WITH REVERSE WEAVE

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New York 1, N. Y. Warehouse PATERSON, N. J.

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JOHN J. McCLOSKEY, Inc.
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MANUFACTURERS AND DEALERS
TEXTILE MACHINERY OF ALL TYPES
APPRAISALS WOOLEN—WORSTED—COTTON LIQUIDATIONS
NEW AND USED—REBUILT
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S&K Where your $$$$ buy MORE

94 Draper Auto. Model E Dobby Looms, Motor Driven, 43" cloth.

50 C & K S-3 Looms 54" R.S.

60 FOSTER CONERS MODEL 75A

30 C & K 2x1 52" R. S.
16 C & K 2x1 Automatic 72" R. S.
6 C & K 4x4 72" R. S.
56 C & K 4x1 56" R. S.
4 C & K 110" R. S. 4x4
2 C & K 100" R. S. 4x4
12 C & K 92" R. S. 4x1 Automatic
18 C & K 4x1 Automatic 82" R.S.
5 C & K 4x4 82" R.S.

DYEING MACHINERY
1 40' Hinnikens 60" frame with Gas Burners, reeves & motor
6 60" Hinnikens Jiggs all stainless steel
1 Paterson Examiner, 72" wide
1 72" Park Woolson Decater
1 Set 18 Dry Cans 48" face; 5 stainless steel, 13 iron tinned with reeves
8 Dry Boxes S.S. lined 8'—10'—12'
1 Jostrom fabric conditioner 64"
1 14 can Butterworth dryer 142"
1 19 can Butterworth dryer 72"
1 Textile Tenter Frame 52" wide 40' long
4 Three (3) Roll Padders 45"
10 50" Dry Cans
1 Birch Bros. Scutcher & Vacuum 60"

SILK THROWING MACHINERY
5 Atwood 5B Twisters
9 Atwood Single Deck Utility Spinners
30 Universal Coners #50
8 Sipp Warpers & Winders
20 #90 Universals
4 Oswald-Grundy 46—Spindle Cop Winders

STAVE & KESSLER
106 KEARNEY ST. P. O. Box 1611 Paterson, N. J.
Phone ARmory 4-7486

(Continued from page 286)

availability of benzene is based on imports. Actually, quantity-wise, it will be something of the magnitude of 60,000,000 gallons for the calendar year.

Aniline

NPA—Sixty percent of the aniline goes into rubber chemicals for processing chemicals. In the economy we find ourselves in at the moment, our demand for rubber chemicals are very much higher than in a natural-rubber economy. You might say almost twice the amount of anti-oxidant and accelerators are needed for G. S. rubber than for natural, which has put quite a load on our aniline supply. We are increasing our capacity from 106,000,000 in 1950 up to approximately 135,000,000, of which about half is now in operation.

Phthalic anhydride

NPA—Another product that is giving us considerable trouble at the moment, because of heavy demands, is phthalic anhydride. Our 1950 capacity was about 225,000,000 tons, and we expect to see an increase in that capacity by about 125,000,000 more. However ,we find that any time we increase the capacity of any of these intermediates or products near the end product, we have to look all the way back to the basic source of raw material, like phenol and styrene, and the products stemming from those. In the case of phthalic anhydride we have to look back to the naphthalene or to orthocyline recovered from the petroleum industry. There again it is necessary that we plan back through all these so all these programs will tie together.

It is not going to do us any good to build phthalic-anhydride plants if we are not going to have the naphtha and thylene to go with it, and the same with the benzene chemical.

Steel drums

NPA—There is a limitation order, M-75, that restricts the chemical industry to a quota of new steel drums for this year equal to 90% of those used in 1950. The chemical industry uses about 400,000 tons of steel for drums, but through a container re-use plan instituted by this section, there has been eliminated the use of several thousand tons of steel for this year. With this program in effect, there has been no real shortage of steel drums in the chemical industry this year. Facing a probable 15% reduction next year, we feel we have a good chance of getting by if all the industry follows through with this re-use program of the drums.

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10—58" C&K 2x1 S-S Auto. Shuttle Change Looms, 25 harness
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8—72", 84" R.S. C&K 4x4 Box Looms with jacquards
30—72", 82" C&K 4x4 Box Looms, motor driven
60—78½", 82" Draper Mod. D Looms, 20 harness, motor driven
100—82", 82" C&K 4x1 Auto., 25 harness Looms, motor driven
8—100" C&K 2x1 Auto. Looms, 25 harness
4—Paul Muller Label Looms, 1938-44, with C&K Jacquards
2—65" Simpson type Winders
1—30" Silk Calender
1—67½" Yale Semi-Decater, 36" dia. cylinder
3—68" & 72" P&W Doubling Mfg. & Winding Mchs.
1—82" P&S Rev. Stick Loop Dryer

1—120 arm Buhlman Skein Dyeing Machine
1—50" Continuous Vat Dyeing Machine, complete
1—80" Hunter stainless steel lined Dyeing Machine
2—54" Hunter 1941, 8-cylinder double doffer Garnetts, complete, with running-out aprons, compression rolls, butt holders, slitters, P&S cone willow
1—60" James Smith 3 cyl. Garnett
1—30" Sample Piece Dye Kettle S. S. lined
2—Kiers; 8x14' and 9x13'; pumps & motors
3—360 sq. J&B 3" gauge Mules, Brand New
1—78" Borchers 14R Dbl. Acting Knapper
5—45"—50" 2 and 3 roll Padders
1—60" V. VI. Palmer complete with Quetch
4—32"—82" Gessner Cloth Presses
1—40" C & M Fearnaught Picker
1—40" James Smith Mixing Picker
1—40" R.B.AF. 4-color Print Machine, will accommodate print rolls 30" circumference
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1—40" James Smith 2 cyl. Shoddy Card
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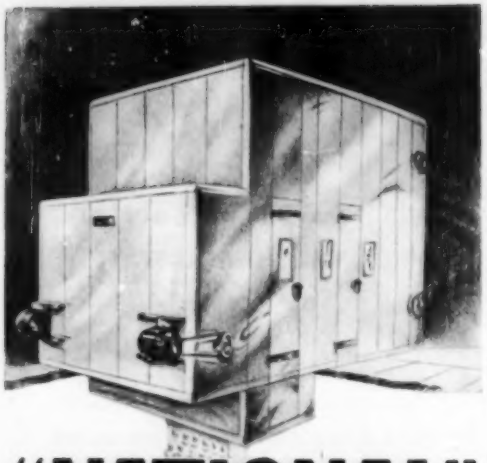

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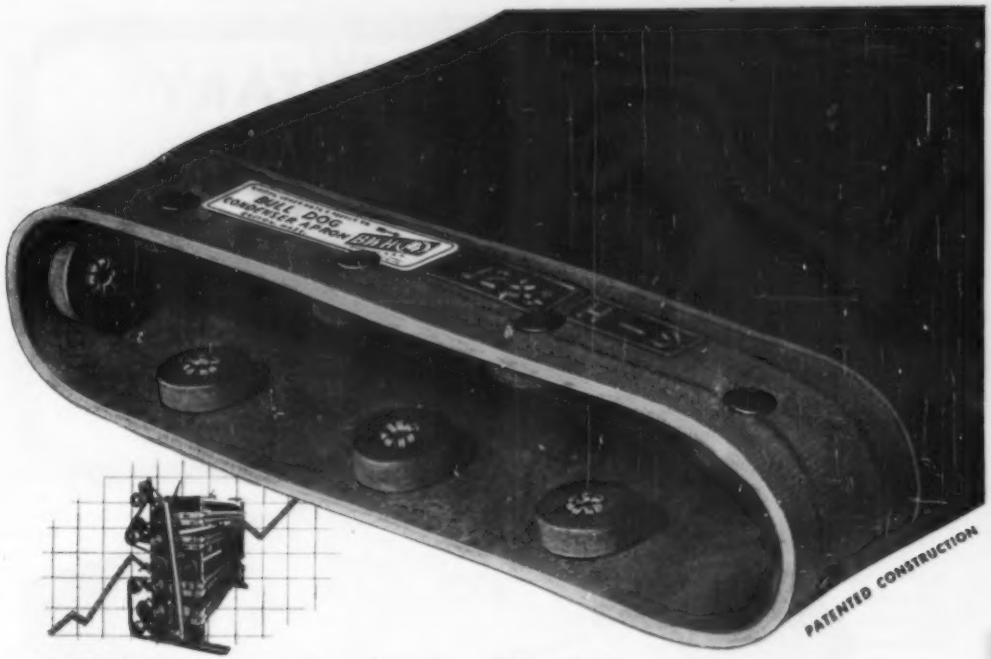

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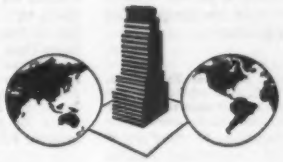


▶ **Brief Summaries in Spanish, French, and German of the Major Feature Articles in This Month's Issue**

Español

Hemos añadido este suplemento a la edición completa de TEXTILE WORLD de los Estados Unidos en beneficio de nuestros estimados lectores del extranjero. En las columnas siguientes encontrará usted información sobre los artículos importantes que aparecen en las páginas de este número—información que puede ayudarle a aquilatar cada uno de los artículos originales sacándoles mayor provecho en su uso individual.

TEXTILE WORLD espera que estas traducciones breves, al idioma que es más familiar para usted, le sirvan de guía para decidir usted mismo cuáles artículos le conviene traducir por su propia cuenta, dado su interés especial en las diferentes fases de nuestra gran industria textilera mundial. Esas traducciones serán de gran valor práctico para aquellas personas de su organización que tengan dificultades con la terminología de tejidos del idioma inglés.

Véase la página 3 de las hojas corrientes de este número para la relación completa del contenido en inglés.

Página 106

Nuevo Alumbrado en las Fabricas del Sur. Este artículo describe e ilustra las recientes instalaciones mejoradas de alumbrado en las fábricas de tejidos del sur de los E.U.A. Las tendencias mostradas en estas instalaciones son: (1) uso de lámparas continuas; (2) cierto uso del tipo de lámpara blanca, delgada y de luz fresca; y (3) la obtención de grados más altos de iluminación que nunca antes a la altura de trabajo. Las cantidades típicas de bujías usadas son: tejedura, 54; inspección, 30; urdido y encolado, 45; hilatura de menguado, 50; y alumbrado en general (como en acabado), 30.

Página 108

Cómo la Pepperell Mezcla el Algodón. Al ensayar la fineza de la fibra de algodón en todas las pacas recibidas y al almacenar las pacas según las clasificaciones de fineza, la Pepperell Mfg. Co. ha

Français

Ce supplément a été ajouté à notre édition régulière américaine à l'intention de nos estimés clients d'outre-mer. Dans les colonnes qui suivent vous trouverez des renseignements concernant les articles principaux de ce numéro, renseignements qui vous permettront de juger de l'intérêt que ces articles peuvent avoir dans votre cas particulier.

TEXTILE WORLD espère que ces résumés présentés dans une langue qui vous est plus familière vous permettront de décider quels sont les articles qui vous intéressent suffisamment pour que vous les fassiez traduire plus en long par un traducteur de votre ville. Ces traductions seraient utiles aux membres de votre firme non familiarisés avec la terminologie anglaise de l'industrie textile.

Consultez aussi la Table des Matières, page 3 de ce numéro.

Page 106

Question d'éclairage dans des usines du Sud des Etats-Unis. D'un article qui décrit de récentes installations d'éclairage dans des usines du Sud il se dégage que la tendance est aux tubes longs et continus et à une augmentation de l'illumination au niveau de travail. Citons comme chiffres types, exprimés en pieds-bougies: tissage, 54; inspection, 30; ourdissage et encollage, 45; tricotage sur métiers Cotton, 50; éclairage général tel que dans une section d'apprêts par exemple, 30.

Page 108

Comment on mélange le coton aux usines Pepperell. Le système comporte un échantillonnage de chaque balle de coton pour en déterminer la finesse. La classification et le groupement des balles dans l'entrepôt se fait sur la base de la finesse du coton, ce qui permet de traiter par la suite en fabrication des lots pratiquement identiques. Il résulte de ceci une réduction appréciable des boutons, un produit plus égal à la teinture et en général d'une qualité supérieure. Ce système d'entreposage par type, longueur de fibres et finesse facilite en outre les différents

Deutsch

Diese Beilage wurde der vollstaendigen Vereinigten Staaten Ausgabe der TEXTILE WORLD zur Erleichterung fuer unsere geschaetzten Leser in Uebersee zugefuegt. In den nachfolgenden Spalten werden Sie von den wichtigsten Fachaufsaetzen, die in diesem Heft erscheinen, in Kenntnis gesetzt, um Ihnen in der Auswahl der Original Aufsaetze, die fuer Sie von besonderem Interesse sind, behilflich zu sein.

Die TEXTILE WORLD hofft, dass Sie sich durch diese kurzen Uebersetzungen in eine Sprache mit der Sie vielleicht mehr vertraut sind, veranlasst fuehlen, Fachaufsaetze, die von besonderen Interesse auf dem Gebiet der grossen und weltumspannenden Textil Industrie sind, bei lokalen Uebersetzern ausarbeiten zu lassen. Solche Uebersetzungen waeren von praktischem Wert fuer diejenigen in Ihrem Unternehmen, die Schwierigkeiten mit englischen Fachausdruecken haben.

Siehe Seite 3 der Original Ausgabe fuer das vollstaendige Inhaltsverzeichnis in englischer Sprache.

Seite 106

Neuartige Beleuchtung in Fabriken im Sueden. Es werden die letzthin verbesserten Beleuchtungseinrichtungen in Textilfabriken im Sueden illustriert beschrieben. Die Richtung, die mit diesen Einrichtungen gezeigt werden, sind: (1) Verwendung von aneinander gereihten Beleuchtungskoerpern, (2) Benuetzung von einigen schmaeleren kaltweissen Lampen, und (3) Beibehaltung der gleichmaessigen Lichtstaerke selbst waehrend der Zeit der Hochbelastung. Typische Massbezeichnung der verwendeten Lampen sind: Weben, 54; Inspektion, 30; Kettenscheren und Kettenschweifen, 45; Vollfassioniertes Stricken, 50; allgemeine Beleuchtung (wie auch in der Appretur) 30.

Seite 108

Wie Pepperell Baumwolle mischt. Durch Pruefen der Feinheit der Baumwollfaser aller einlaufenden Ballen und bei Lagerung der Ballen nach Feinheitsgraden, ist

podido reducir los botones en el hilo, obtener teñidura más uniforme, y mantener los niveles de calidad superior en sus productos. Las pacas son almacenadas por grados, por longitud de las fibras, y por la fineza, por lo tanto, se pueden obtener fácilmente del almacén los componentes de las mezclas designadas.

Página 110

Sistemas de "Atajo" para los Estambres. Se ofrecen los resultados obtenidos por las fábricas al utilizar el sistema Whitin "American" y el sistema Saco-Lowell para la hilatura de estambres. Se describe el funcionamiento del Convertidor Pacific. También se ofrece el primer informe de los resultados obtenidos con la continua de hilar estambre McCann de 100 decatizadoras.

Página 114

Manual de Lubricación de Telares Circulares. Se bosqueja en este artículo un procedimiento completo para la conservación preventiva de limpieza y lubricación de los telares circulares. Se describen las propiedades mejoradas de los lubricantes. Se hace hincapié en el entrenamiento adecuado de los engrasadores de las máquinas.

Página 116

Textileros de Georgia Discuten Sobre el Encolado. Una discusión de los métodos de encolado entre los miembros de la organización técnica de Georgia, reveló la satisfacción experimentada con los homogenizadores y el descontento con los manguitos sintéticos. Se trató de los mejores métodos para obtener cabos agotados uniformes en los enjulios parciales. Se informó resultados diferentes con los reguladores electrónicos de encoladoras. El aumento de producción y calidad se dice que resulta utilizando propulsiones multimotoras de encoladoras.

Página 118

Cómo Resolver la Escasez de Fuerza. En las regiones del Mediodía de los E.U.A., donde existe una gran concentración de plantas manufactureras, siempre hay la posibilidad de escasez de fuerza eléctrica, teniéndose que establecer programas de emergencia. Diciembre es el mes crítico que hay que observar para poner en vigor los programas. Las fotos en este artículo muestran las maneras en que una fábrica puede economizar voluntariamente la energía y evitar la regulación de ella por parte del gobierno.

Página 120

Uso de Hilos Viejos en los Orillos. Una fábrica de tejidos de fantasía no tiene que vender sus lotes de hilos desparejos ni tampoco los "tiene que regalar." Este artículo relata cómo una fábrica del sur de los E.U.A. ha elaborado un sistema para utilizar prácticamente todos sus lotes pequeños de recortes como marcadores de orillos. Una fábrica de tejidos de fantasía puede reducir al 1% sus hilos desparejos que tiene que vender, incluyendo los hilos de calidad no uniforme.

Página 121

Buenas Arrancadas en las Máquinas de Menguado de Galga Fina. El rozamiento causa que las zapatas centrales se recalienten hasta unos 94° F. cuando funcionan las máquinas, pero al pararlas por una hora o más, la temperatura desciende a la existente en la sala. Al arrancar nuevamente las máquinas, no funcionarán bien hasta que la temperatura de la barra central se eleve otra vez. El autor de este artículo ha instalado cables calefactores debajo de las barras de sus máquinas para

mélanges que l'on désire obtenir en fabrication.

Page 110

Nouveaux "raccourcis" employés dans la filature du peigné. L'intérêt de cet article réside en son exposé des nouvelles méthodes de filature de peigné employées aux Etats-Unis. Celles-ci incluent la méthode "American" incorporée dans le matériel spécial construit par Whitin ainsi que les machines spéciales pour filer le peigné de la firme Saco-Lowell. L'exposé donne aussi les premiers résultats du ratelier système McCann qui monte 100 bouts.

Page 114

Manuel de lubrification des métiers circulaires à tricoter. La description couvre l'ensemble des mesures préventives rentrant dans le domaine du nettoyage et du graissage de ce genre de machines. Des explications sont données également concernant de nouveaux lubrifiants de création récente. L'article donne des renseignements intéressants la formation d'ouvriers dont la tâche essentielle consiste à lubrifier consciencieusement le matériel.

Page 116

Discussion sur les problèmes d'encollage. Il résulte d'une conférence des techniciens et dirigeants de la Géorgie que les appareils d'homogénéisation donnent des résultats satisfaisants, mais que le nouveau recouvrement des rouleaux de pression, au moyen de produits synthétiques laisse souvent à désirer. La discussion porta aussi sur la question de la longueur uniforme des ensouples de chaînes d'un même groupe. On entendit des opinions différentes concernant les nouveaux appareils électroniques de contrôle. On discuta aussi la question de l'entraînement des encolleuses par l'emploi de plusieurs moteurs et l'on rapporta des résultats satisfaisants.

Page 118

Ce qu'il y a lieu de faire en cas de pénurie de courant électrique. Dans le Sud-Est des Etats Unis, région de forte concentration industrielle, la pénurie de courant est un danger réel et un programme de restrictions pourrait éventuellement être promulgué. Décembre est sous ce rapport le mois le plus critique. Les photographies de l'article montrent certains moyens que les usines peuvent employer pour réduire leur consommation de courant et éviter l'application de règlements restrictifs.

Page 120

Comment utiliser les fils de "déchet" pour tisser les lisières. Les tissages d'articles de fantaisie peuvent faire des économies sérieuses en ne jettant plus au rebut des fins de lots et autres fils considérés dans le passé comme inutilisables. Ces fils peuvent être employés pour tisser les lisières et le pourcentage du fil à vendre comme déchet peut de cette façon être réduit à 1%. Cette conclusion découle de l'expérience faite par une usine du Sud des Etats Unis.

Page 121

Comment obtenir de bonnes mises en route de métiers Cotton fins. C'est un fait connu que par suite des différentes frictions produites dans un métier les fontures du centre de la machine atteignent des températures allant jusqu'à 94 degrés Fahrenheit. Si l'on arrête le métier pendant une heure ou d'avantage la température diminuera et finalement sera égale à la température ambiante. Toutefois lorsque le métier est remis en

es der Pepperell Mfg. Co., gelungen, Noppenbildung zu vermindern, gleichmaessiges Faerben zu erzielen und Hoechstqualitaet beizubehalten. Ballen werden nach Graden, Stapel und Feinheit eingelagert, sodass die Komponenten der zu bereitenden Mischungen leicht aus dem Lagerhaus erhaeltlich sind.

Seite 110

Verkuerztes Kammgarnspinnverfahren. Es werden die bei den Fabriken erzielten Resultate bei Verwendung des Whitin-American Verfahrens und des Saco-Lowell Systems beim Kammgarnspinnen gegeben. Die Arbeitsweise des Pacific Converters wird beschrieben. Der erste Bericht ueber die mit der McCann 100-Dosen-Kammgarnspinnmaschine erzielten Resultate wird ebenfalls gegeben.

Seite 114

Anweisungen zur Schmierung von Rundstrickmaschinen. Eine komplette Vorbeugungs-Instandhaltungsprozedur zum Reinigen und Schmieren der Strickmaschinen ist skizziert. Es werden Eigenschaften der verbesserten Schmierungen beschrieben. Besonderes Gewicht wird auf richtige Schulung des Maschinoelungspersonals gelegt.

Seite 116

Fachleute aus Georgia besprechen Kettenschweifen. Eine Diskussion betreffs Gebraeuche im Kettenschweifen, die Mitglieder einer technischen Organisation in Georgia gefuehrt haben, zeigte Befriedigung bei Verwendung von Homogenizers und einige Unzulaenglichkeiten des synthetischen Walzenbelages. Methoden zur Erzielung eines gleichmaessigen Scherbaumabschnittes beim Auslaufen des Garnes wurde besprochen. Verschiedene Resultate wurden ueber elektronischer Kettenschweifkontrolle gegeben. Erhoehte Produktion und Qualitaet soll mit Multimotor-Kettenschweifantrieben erreicht werden.

Seite 118

Wie man Kraftstrommangel ueberkommt. Im Suedosten, wo viele Fabriksanlagen konzentriert sind, besteht immer die Moeglichkeit eines Kraftstrommangels; es wurde daher fuer eventuelle Notfaelle ein Plan ausgearbeitet. Dezember ist der kritische Monat in welchem man sich vor Kuerzungen vorsehen muss. Abbildungen in diesem Artikel zeigen in welcher Weise Fabriken den Kraftstrom freiwillig konservieren und Regierungsmassnahmen vermeiden koennen.

Seite 120

Gebrauch von Garnresten fuer die Webleiste. Eine Modewarenfabrik ist nicht gezwungen, ihre Garnueberreste mit Verlust zu verkaufen oder zu "verschenken". Eine Weberei im Sueden hat ein System ausgearbeitet, nach welchem sie alle Garnueberschuesse und Garnreste fuer die Stoffleiste verwendet. Eine Modeweberei kann ihre Garnreste verwenden und verkauft hoechstens 1% als Abfall inklusive fehlerhafter Garne.

Seite 121

Guter Start bei feinmaschigen, vollfassonierten Maschinen. Reibung verursacht das Erhitzen des Mittelstueck bis zu 94° F. waehrend des Laufens der Maschinen. Wenn sie (die Maschinen) fuer ein oder mehrere Stunden abgestellt werden, faellt die Temperatur zu Zimmerwaerme. Wenn die Maschine wieder anlaeuft, wird sie nicht eher gut laufen, als bis die Temperatur des Zentrumstabes wieder steigt. Der Autor dieses Artikels hat ein Heiz-

mantener la temperatura constante, eliminando así la mayor parte de las dificultades en las arrancadas.

Página 122

Solucionadas los Problemas de Manipulación de Materiales de una Fábrica de Estambres. En este artículo se describen y demuestran métodos más fáciles para la manipulación de estambres peinados, urdimbres, y géneros de los tipos usados en una fábrica de estambres. Para manipular el estambre peinado se utilizan plataformas y carretillas de horquilla; para manipular los plegadores de urdimbre se usan levantadores de monoriel superior. Un ingenioso pedestal de estiraje de urdimbre permite también la colocación fácil de las laminillas.

Página 126

Reducción del 25% en la Variación del Hilo. El uso de cilindros de salida con cojinetes de bolas en lugar de cilindros huecos en las mecheras, ha producido un promedio del 25 por ciento de reducción en la variación de los hilos finos de algodón. Se hicieron dos ensayos con hilo hilado (1) en mecheras y en continuas de hilar equipadas con cilindros huecos; y (2) en continuas equipadas con los cilindros de salida de cojinetes de bolas desarrollados recientemente. La variación en el hilo producido en los cilindros con cojinetes de bolas disminuyó en dos ensayos hasta en 38,4% y en 34%.

Página 127

El "Dynel" Tiene Resistencia Contra los Productos Químicos. En un ensayo reciente en un laboratorio comercial, el "dynel", la nueva fibra acrílica hecha por la Union Carbide & Carbon Corp., demostró tener una sorprendente resistencia contra muchos productos químicos. Se hicieron pruebas con 80 soluciones por más de 20 horas a temperaturas desde la ambiente a la de ebullición. Los ensayos probaron que los géneros de dynel no son afectados por agentes blanqueadores o de limpieza en seco.

Página 128

Datos de Desperdicios de la Sala de Carda. Una fábrica ha encontrado de gran utilidad, para reducir el desperdicio de su sala de cardas, una tarjeta de datos de los desperdicios hechos por cada turno. La planta ha establecido normas para los desperdicios en cada procedimiento, y estas son mantenidas rígidamente por los operarios. Las instrucciones insuficientes a los supervisores y operarios o la falla de verificar estrictamente el pesado y la anotación de los desperdicios de cada turno puede resultar en pérdida excesiva de la materia prima. Los desperdicios reutilizables requieren especialmente atención constante.

Página 130

Obtención de Entregas Rápidas de Propulsiones de Correas en V. Debido a que los fabricantes de propulsiones pueden estar sumamente atareados con los trabajos para la defensa o por la escasez de materiales en estos días, las entregas de propulsiones para correas en V pueden demorarse. En este artículo se ofrecen consejos prácticos para acelerar las entregas, tales como pedir las propulsiones de los tamaños en existencia, usar correas de gran capacidad con propulsiones más pequeñas, usar bujes cónicos, etc.

Página 131

Lubricación Automática de Anillos de Retorcedoras. Una planta retorcedora de

marche son fonctionnement laissera à désirer jusqu'à ce que les fontures du centre se soient de nouveau échauffées. Pour obvier à ces inconvénients l'auteur de cet article a placé des cables de chauffage sous les barres, ce qui lui permet de les maintenir à un température constante. Ceci lui a permis de supprimer presque toutes les difficultés de mise en route.

Page 122

Problèmes de manutention dans une usine de peigné. L'usine que cet article cite comme exemple a amélioré la manutention de ses rubans de peignage, des chaînes ourdies et des tissus. Des "trucks" électriques du modèle employé dans les salles d'usines et munis de fourches qui se glissent dans des plateaux de chargement en bois servent à déplacer les rubans de peigneuses et à les mettre en magasin. La manutention des chaînes ourdies se fait par monorail. Un nouveau ratelier d'un modèle ingénieux facilite le placement des casse-fils.

Page 126

Comment furent réduits de 25% les écarts de qualité de fils. Une usine produisant des fils fins fut à même de réduire les écarts de qualité de 25% en remplaçant les cylindres d'étirage avant du type ordinaire, montés sur ses bancs en gros par des cylindres montés sur billes. Au cours d'essais entrepris pour comparer les résultats de bancs à broches et de métiers à filer équippés de cylindres avant ordinaires et de cylindres avant du type récent à billes, l'avantage fut en faveur de ce dernier système, les variations dans le fil ayant été réduites de 34% dans une épreuve et de 38.4% dans une autre.

Page 127

La fibre Dynel résiste aux agents chimiques. La fibre Dynel qui fut récemment soumise à une série d'essais entrepris dans un laboratoire commercial a démontré une résistance remarquable à l'action de différents agents chimiques. Cette fibre acrylique est produite par la Union Carbide & Carbon Corporation. Ces essais faits avec 80 solutions différentes à des températures variant de la température ambiante au point d'ébullition durèrent 20 heures. La conclusion qui s'en dégagea est que Dynel n'est pas affecté par les produits de blanchissage ou par ceux de nettoyage à sec.

Page 128

Contrôle des déchets de la salle des cardes. L'article cite le cas d'une usine qui place dans la salle de cardes des bulletins qui renseignent la quantité de déchets produite par chaque équipe, exprimée en pourcents de la quantité qui devrait ne pas être dépassée. On est arrivé grâce à ce système à diminuer les déchets. On a déterminé le pourcentage à ne pas dépasser pour chaque genre de déchets. Ce pourcentage est maintenu d'assez près. Toutefois on a observé un relâchement chaque fois que les instructions au personnel manquaient de précision ou que des pesages de contrôle ne se faisaient pas constamment. Il y a lieu de surveiller tout particulièrement la question des déchets qui sont réutilisés.

Page 130

Comment obvier aux retards de livraison pour les courroies en "V". Il peut arriver que votre fournisseur de courroies en "V" soit occupé à d'importantes livraisons pour l'armée ou qu'il soit à court de certaines matières premières. Ceci se traduira probablement en retards de livraisons de

kabel unter den Staeben der Maschine installiert, um die Temperatur auf gleicher Hoehe zu halten und hat dadurch die meisten Anlaufschwierigkeiten eliminiert.

Seite 122

Kammgarnfabrik loest ihre Materialhandhabungsprobleme. Leichtere Methoden, um die in einer Kammgarnfabrik gebrauchten Kammzuege, Kettenbaeume und Fertigfabrikate zu handhaben, werden in diesem Artikel gezeigt und beschrieben. Gabelhebekarren und Rutschen werden zur Ladung und Einlagerung von Kammzuegen verwendet. Eine an der Saaldecke angebrachte Gleitschiene wird fuer die Befoerderung der Kettenbaeume verwendet. Ein praktisches Ketteneinzugsgestell gestattet leichtes Aufstecken der Fadenreiter.

Seite 126

25% Verminderung von Garnabweichungen. Verwendung von Kugellager bei Vorder-Streckwalzen anstatt Mantelwalzen bei Feinflyermaschinen, hat eine 25%ige Verminderung der Abweichungen bei feinen Baumwollgarnen in einer Fabrik hervorgerufen. Zwei Versuche wurden gemacht von Garnen gesponnen auf Feinflyer und Spinnmaschinen ausgestattet mit Mantelwalzen und auf Maschinen ausgestattet mit den letzthin herausgebrachten Kugellager an den Vorder-Streckwalzen. Abweichungen in dem auf Kugellager-Streckwalzen erzeugten Garn wurden in 2 Versuchen um 38.4% und 34% herabgesetzt.

Seite 127

"Dynel" leistet Chemikalien Widerstand. In einem unlaengst gemachten kommerziellem Laboratoriumstest, zeigte "Dynel", die acrylic Stapelfaser der Union Carbide und Carbon Corp., einen bemerkenswerten Widerstand zu vielen Chemikalien. Es wurden Versuche mit 80 Loesungen ueber 20 Stunden gemacht, bei Temperaturen von Zimmerwaerme bis zum Sieden. Die Versuche zeigten, dass Dynelerzeugnisse von Bleich- und Reinigungsmitteln unberuehrt blieben.

Seite 128

Aufzeichnung des Abfalles im Kardensaal. Eine Aufzeichnung des Kardenabfalles, so angebracht, dass alle Angestellten den Perzentsatz des Abfalles in jeder Schichte sehen koennen, hat einer Fabrik geholfen, ihren Kardenabfall zu reduzieren. Standard fuer Abfall wurde fuer jede Abfallsart festgesetzt. Perzentueller Abfall jedes Arbeitsvorganges wird nahe dem Standard gehalten. Ungenuegende Instruktionen an Aufseher und Arbeiter, oder Mangel an oefterer Kontrolle von Gewichten und Aufzeichnungen jeder Schichte, kann uebermaessiger Verlust von Rohmaterialien zur Folge haben. Speziell wiederzuverarbeitender Abfall verlangt stete Aufmerksamkeit.

Seite 130

Raschere Lieferung von "V" Treibriemen-Antrieben. Da Erzeuger von Antrieben durch Staatsauftraege ueberbeschaeftigt sind oder in diesen Zeiten an Materialmangel leiden, koennen Lieferungen von "V" Treibriemen-Antrieben an eine Fabrik verzoegert werden. Praktische Ratschlaege fuer raschere Lieferung, wie ordern von Vorratsgroessen, Gebrauch von Hochleistungsriemen mit kleineren Antrieben, und Verwendung zugespitzter Lagerbuechsen, etc., werden gegeben.

Seite 131

Automatische Schmierung der Ringe an

hilos de Fiberglas, al instalar un sistema de lubricación automática de anillos, ha aumentado cinco veces la duración del cursor, ha eliminado el exceso de esfuerzo en el trabajo y ha aumentado las velocidades de los husos en un 85 por ciento. Se ha reducido el consumo de aceite y eliminado sus manchas en los hilos. Un reloj automático regula el bombeo o aspiración del aceite de un tambor a los anillos cada 20 minutos.

Página 132

Mejoramiento del Rendimiento de Medias. Un estudio del Depto. del Trabajo de los E.U.A. sobre la productividad entre los fabricantes americanos de medias demuestra que desde 1929 se ha reducido el número de horas-hombres necesarias para producir una docena de pares de medias. El aumento del rendimiento ha sido obtenido con sólo un ligero aumento en el total de horas-hombres empleadas.

Página 133

Exposición de la AATCC. En el Hotel Statler, de la ciudad de Nueva York, se celebró la mayor exposisión textilera en los 30 años de existencia de la American Association of Textile Chemists & Colorists, conjuntamente con la convención nacional anual y la presentación de estudios técnicos. Unos 90 exhibidores tenían espacio de casillas y demostraron equipos para elaboración en húmedo y accesorios que variaron de maquinaria para teñir a auxiliares químicos.

Página 136

Las Fibras "Maravillosas" Desafian a las Gerencias. J. Spencer Love, ejecutivo de la Burlington Mills Corp., urge que por medio de la investigación y los experimentos con las fibras sintéticas más nuevas, se puede colocar en el mercado más géneros que se adapten mejor a cada propósito en particular. Se critica la tendencia de la industria a dar publicidad excesiva a las nuevas fibras antes de que los géneros hechos con ellas entren en producción comercial. El Sr. Love urge la formación de un solo grupo para la promoción de las nuevas fibras sintéticas, el cual tendría como objectivo el beneficio de los productores de fibras hechas por el hombre, y para beneficiar igualmente a las fábricas y comerciantes que trafican con ellas.

Página 138

Estudios de la AATCC. Los puntos principales de los estudios técnicos presentados en la convención anual de la American Association of Textile Chemists & Colorists son ofrecidos en este informe. En la reunión de tres días se presentaron 20 estudios, incluyendo dos sobre la fase de estudiantes, sobre temas que variaron del aditamento de colorantes azoicos al algodón por enlace de éter, hasta el estudio profundo de los modernos sistemas continuos al peróxido.

vos commandes. Lisez dans cet article ce que vous pouvez faire pour obvier à cet état de choses. Ne commandez si possible que des numéros "standard," supprimez pour le moment tout modèle qui sort de l'ordinaire, prenez des courroies plus courtes mais à forte capacité, etc.

Page 131

Graissage automatique des anneaux de retordeuses. Grâce à l'installation d'un système central de graissage automatique d'anneaux de retordeuses, une firme retordant du verre filé a obtenu les avantages suivants: les curseurs durent cinq fois plus longtemps que par le passé; les broches tournent 85% plus vite; le temps consacré au graissage a été diminué considérablement. La consommation d'huile a été réduite et les taches d'huile supprimées. Une horloge actionne la pompe de graissage toutes les vingt minutes.

Page 132

Amélioration de la production de bonneterie. Les statistiques du Ministère du Travail prouvent que le nombre d'heures nécessaires pour produire une douzaine de bas a diminué depuis 1939. L'augmentation de la production totale de cet article aux Etats-Unis n'a demandé qu'un nombre relativement faible d'heures de travail supplémentaires comparé au passé.

Page 133

Exposition de l'AATCC. Cette année connut la plus grande exposition de produits et matériel de finissage et de teinture organisée sous le patronage et à l'occasion de l'Assemblée annuelle de l'Association Américaine des Teinturiers et Chimistes de l'Industrie Textile, qui fêta son trentième anniversaire à l'Hotel Statler à New-York. Comme d'ordinaire on y présenta des dissertations et des études techniques. Environ 90 firmes y exposèrent leurs produits comprenant du matériel de finissage au mouillé, des machines de teinture et les adjuvants chimiques.

Page 136

Les fibres "miracle" mettront à l'épreuve l'ingénuité des directions d'usines. Monsieur J. Spencer Love, "Chairman" du Conseil d'Administration de la Burlington Mills Corporation, recommande que l'industrie textile fasse une étude complète de toutes les possibilités qui lui sont offertes par les nouveaux textiles synthétiques et de leurs applications à des tissus remplissant des fonctions spéciales. Il regrette que ces nouvelles fibres fassent souvent l'objet d'une publicité intensive et précoce avant qu'une étude sérieuse n'ait permis de juger de la valeur de leurs applications commerciales. Il recommande la formation d'un groupement spécial de l'industrie textile dont le but consisterait à lancer des produits à base de produits synthétiques ayant fait leurs preuves et qui agirait dans l'intérêt commun des tissages et des fabricants de confection ainsi que du négoce en général.

der Zwirnmaschine. Durch Installierung eines zentralisierten, automatischen Schmierungssystems der Ringe an ihren Zwirnmaschinen, hat eine Fabrik im Zwirnen von Glasfasergarnen die Lebensdauer eines Laeufers 5 fach erhoeht, unnoetigen Arbeitsaufwand eliminiert und Spindelgeschwindigkeiten um 85% erhoeht. Oelverbrauch wurde reduziert und Oelflecke im Garn vermieden. Eine Uhr kontrolliert automatisch die Oelpumpe, die von einem Fass das Oel zu den Ringen (alle 20 Minuten) liefert.

Seite 132

Verbesserte Strumpfproduktion. Eine Studie des U.S. Department of Labor bezueglich der Produktivitaet unter den Strumpferzeugern zeigt, dass die zur Erzeugung eines Dutzend Struempfe notwendigen Stunden per Arbeiter seit 1939 herabgesetzt wurden. Erhoehte Produktion wurde bei nur geringer Erhoehung der benoetigten Arbeitszeit erreicht.

Seite 133

AATCC Ausstellung. Die groesste Textilausstellung in der Geschichte der 30 Jahre alten amerikanischen Gesellschaft der Textilchemiker und Koloristen wurde gleichzeitig mit der jaehrlichen Generalversammlung, bei welcher technische Berichte unterbreitet wurden, im Hotel Statler in New York, abgehalten. Ungefaehr 90 Aussteller hatten Standplaetze und zeigten Ausruestungen und Behelfe fuer Nassverfahren, angefangen von Faerbemaschinen bis zu chemischen Hilfsmitteln.

Seite 136

Herausforderung ans Management bezuegl. "Wunder" Fasern. J. Spencer Love, Praesident der Burlington Mills Corp., draengt zur gruendlichen Forschung und Versuchen mit neueren synthetischen Fasern, so dass mehr Fabrikate, die am besten fuer spezielle Zwecke geeignet sind, auf den Markt gebracht werden koennen. Die Tendenz der Industrien, die Fasern zu ueberpublizieren, ehe die Fabrikate kommerziell produziert sind, wird kritisiert. Mr. Love regt die Gruendung einer einheitlichen Foerderungsgruppe fuer synthetische Fasern an, zum Wohle der Kunstfasernerzeuger, Fabriken und Warenhaendler.

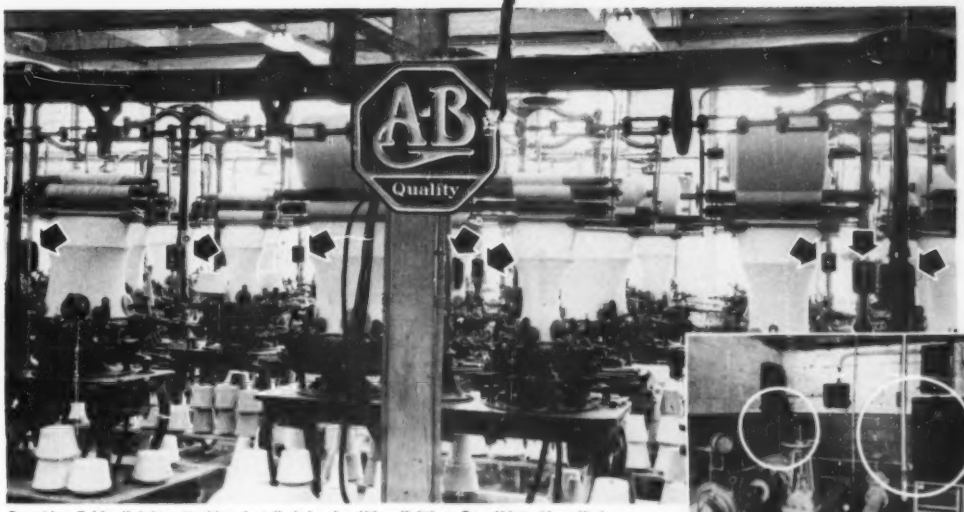
Seite 138

AATCC Reports. Hoehepunkte, der bei der 30sten Jahresversammlung der amerikanischen Gesellschaft der Textilchemiker und Koloristen gehaltenen technischen Vortraege, werden in diesem Report wiedergegeben. Im Ganzen wurden 20 Abhandlungen, inklusive zweier Kapitel von Abhandlungen von Studenten, in der 3 Tage dauernden Konferenz unterbreitet, die sich mit der Haltbarkeit von azoischen Farben an Baumwolle durch Aetherverb indungen, bis zu einer kritischen Studie des modernen kontinuierlichen Superoxydsystems, befassten.

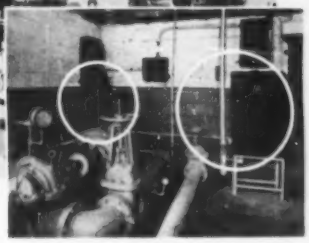
Anuncio: La nueva guarnición de carda de la Benjamin Booth Co. ahorra tiempo, dinero y trabajo. Véase la página 201.

Annonce: La nouvelle garniture de cardes fabriquée par Benjamin Booth Company permet de réaliser des économies de temps, de main d'oeuvre et d'argent. Voyez page 201.

Annoncen: Benjamin Booth Co.'s neuer Kratzenbelag spart Zeit, Geld, Arbeit. Siehe Seite 201.



Tompkins Table Knitting Machine installed in the Utica Knitting Co., Utica, New York. Ninety-eight Allen-Bradley Bulletin 609 Manual Starters provide safe and trouble free service.



Two A-B Bulletin 740 Magnetic Resistance Type Starters used to start pumps in the bleaching and dye house in this Utica mill.

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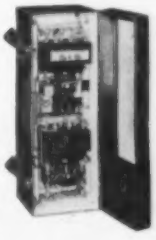

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